CURRENT NEWS

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ENERGY EFFICIENCY AND CITIZENS: POWERING INDIA'S NET ZERO JOURNEY

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India's power sector is transforming as the country works toward its 2030 climate commitments and its net zero target for 2070. Rapid economic growth, rising electricity demand, continuing reliance on coal and the need to ensure reliable, affordable power make it essential to prioritise solutions that deliver the greatest impact at the lowest cost. In this context, energy efficiency has rightly emerged as India's "first fuel", because every unit of electricity saved avoids the cost of building new plants, transmission networks, fuel imports and environmental damage.

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India's experience over the last decade shows what efficiency can achieve. The Bureau of Energy Efficiency's Perform-Achieve-Trade (PAT) scheme has already helped avoid an estimated 90 million tonnes of CO_2, while the star-labelling programme for appliances has enabled savings of over 300 billion units of electricity, directly reducing household electricity bills and easing pressure on the grid. India's UJALA programme transformed domestic lighting, replacing conventional bulbs with over 40 crore LED lamps, cutting both energy consumption and peak demand. Public infrastructure has also been reshaped, with more than 1.3 crore LED streetlights illuminating towns and cities more efficiently.

Why Efficiency First, Not Renewables Alone

India has already crossed 180 GW of renewable capacity, and Tamil Nadu remains one of the most renewable-integrated states with nearly 50% of its installed capacity coming from renewables, including about 10 GW of wind power. While this represents significant progress, three structural realities (i.e. peak demand challenges, adding new generation capacity & financial risks for utilities) still constrain the transition. Renewables do not eliminate peak demand challenges because coal continues to shoulder peak loads, whereas efficiency directly reduces peak stress on the system. Adding new generation capacity is also capital-intensive and time-consuming, whereas efficiency delivers immediate results without land conflicts, transmission delays, or heavy investment cycles. Equally importantly, efficiency lowers systemic financial risk for utilities by reducing the need for subsidies and expensive peak power procurement.

A study by the International Energy Agency suggested that efficiency improvements alone could reduce India's energy demand by 20-25% by 2040 through sustained efficiency action, and it can avoid building hundreds of gigawatts of new capacity. Even saving just one megawatt can have a big impact on TNPDCL's services, by reducing peak purchase costs and enhancing grid flexibility.

Efficiency is also a social policy tool. UJALA LEDs lowered household lighting costs nationwide. Tamil Nadu's LED streetlighting cut municipal expenses while improving safety. Efficient agricultural pumps reduce subsidy pressures while stabilising rural supply. These outcomes build trust and public legitimacy for deeper reforms.

National Energy Conservation Day: From Awareness to Everyday Action

Every year on December 14, India observes National Energy Conservation Day, commemorating the efforts of the Bureau of Energy Efficiency (BEE) to promote sustainable energy practices. The objective of this day is to (i) spread understanding of why saving energy matters in daily life (ii) encourage the use of efficient appliances, technologies, and practices (iii) motivate people to avoid unnecessary or excessive energy use (iv) build a culture of conscious and responsible energy consumption among citizens and (v) reinforce national efforts to lower energy intensity and advance sustainability.

The importance of this day lies in its recognition that India's net-zero vision cannot be achieved by industry or government alone. Real impact arises when citizens develop efficiency as a daily habit - turning off unused lights and appliances, choosing star-rated devices, adopting rooftop solar, and moderating cooling and transport choices.

This day serves not merely as a symbolic event for our nation to reflect on our collective actions. It reminds everyone from households, industries, and institutions that every little effort in conservation can lead to direct economic and environmental dividends. It encourages us all to to move from awareness to making efficiency a form of civic duty.

Educating Citizens and Building a Culture of Efficiency

Energy transitions can succeed only when citizens understand their role within them. Education, therefore, becomes central. Nationally, efforts are underway to incorporate sustainability and energy literacy into learning. In Tamil Nadu, schools and colleges participating in energy clubs, climate awareness drives and National Energy Conservation initiatives which are turning knowledge into practice through campus audits, "switch-off" campaigns and innovation projects.

India's Lifestyle for Environment (LiFE) framework recognises citizens' choices. Policy alone does not shift systems; behaviour does. For example, citizens' acceptance of LED light appliances and their preference for efficient home appliances are notable behavioural changes.

India offers practical examples, such as the growing interest in rooftop solar among households, which continues to rise under initiatives like PM Surya Ghar, with lakhs of Tamil Nadu households adopting or considering rooftop systems. These everyday acts like choosing star-rated appliances, cycling or using public transport, supporting waste reduction, directly reduce emissions and electricity demand. When millions of people behave in this manner, the impact reaches a national scale.

A citizen's role cannot end at "awareness". It's crucial to involve citizens in public consultations, social audits and grievance systems. This is especially important for areas where thermal power stations are situated or are developing renewable energy projects. Additionally, technologies like smart meters and AI-based tools can empower households, transforming them from passive consumers into active participants in the energy sector. This collaborative approach can lead to a more sustainable energy system.

What steps should be taken:

India's energy conversation usually centres around supply. If India needs addition in generation capacity, these tend to be highly visible investments. On the other hand, energy efficiency, being less visible, frequently gets sidelined in policy priorities and public debates. This neglect has major consequences: it puts ongoing strain on our utilities, increases financial burdens on the government, and misses out on the potential of citizens to drive meaningful change.

To correct this course, these shifts are necessary:

> *Treat Efficiency as Infrastructure: Treating efficiency as a key component means allocating budgets for it, similar to how governments budget for generation, transmission, and large projects. Instead of viewing efficiency schemes as soft "awareness" programmes, they should be seen as capacity-creating investments, because avoided demand is functionally equivalent to new capacity on the system.*

> *Make Citizen Participation Quantifiable: Citizen participation often stays at the level of slogans—"save energy", "switch off lights" because it is rarely measured or reported. To unlock its real value, participation must become quantifiable, with clear metrics and transparent public reporting. Track metrics such as the number of households adopting energy-efficient appliances, the percentage of homes with rooftop solar installations, average energy consumption reduction, and changes in use of cooling appliances. Publishing this data in layman friendly terms, in common areas such as traffic signals, parks or any common gathering can help to both demystify technical data and encourage behaviour change.*

Turn Local Governments into Energy Actors: Municipalities and panchayats are positioned to engage directly with citizens and are capable of influencing everyday energy choices, yet they are often treated as passive consumers of state-level energy policy discussions. Empowering these local bodies with greater decision-making authority, technical capacity, and financial autonomy can unlock significant energy-efficiency gains while fostering a strong sense of ownership within communities. Initiatives led by the Ministry of Panchayati Raj have already demonstrated this potential by enabling panchayats to design and implement locally suited models for renewable energy adoption.

Recognition strengthens momentum: Recognition converts efficiency from a purely technical goal into social capital. National Energy Conservation Awards already recognise industries, buildings, DISCOMs, and states, and this public acknowledgement has proven to be a strong motivator. But this is not enough. Awards for Resident Welfare Associations (RWAs), youth clubs, women's groups, Self-Help Groups, and neighbourhoods that show significant reductions in electricity use per household, greater adoption of energy-efficient appliances, or successful community solar projects should also be designed and promoted. Recognising these achievements will encourage others to adopt these efficiency practices.

Conclusion

As India strives toward its ambitious climate goals, energy efficiency stands out as a crucial pillar in the country's journey to net zero. The transformative impact of initiatives like the PAT scheme and the UJALA program highlights the tangible benefits of adopting efficient practices, not just for environmental sustainability but also for economic stability and social equity. By prioritising energy efficiency, India can address immediate energy demands while mitigating reliance on fossil fuels, thus strengthening its power sector's resilience and reliability.

Moreover, the celebration of National Energy Conservation Day highlights the important role that individual citizens play in this collective attempt to save energy. By promoting a culture of energy awareness and responsible consumption, India can achieve meaningful progress in energy savings. Citizens must be treated as active energy stakeholders, not passive recipients of information from the awareness campaigns. Engaging everyone in this effort turns everyday decisions about appliances, cooling, and transportation into a powerful force for India's energy transition.

By educating and empowering citizens to adopt efficient practices, we can spark a significant shift in behaviour that is closer to the net-zero target. Achieving a sustainable energy future is not just about policy changes; it also requires the active participation of each individual.

CONSUMER FOCUS

The appellant, a domestic consumer, noted that his electricity consumption charges for the assessment period of April-June 2024 was Rs. 14,349 and he found this to be exorbitant, as his previous bills did not exceed Rs. 2,500. Such large bills continued to persist throughout the assessment periods of August and October 2024 also.

The appellant submitted a complaint to the Assistant Executive Engineer (AEE) regarding the billing issue. The AE inspected the meter and found that it had been defective since April 2024. Therefore, he requested a Meter Reading Test (MRT) of the same. On 18/10/2024, the AEE reported that the meter data could not be accessed because of software unavailability. This was because the company Landis & Gyr, the supplier of meters to the erstwhile TANGEDCO, had ceased the supply of meters to TNPDCL, as well as suspended personnel support. As a result, the appellant was informed that billing would be done on the basis of the final available reading of the meter.

The appellant filed a complaint before the Consumer Grievance Redressal Forum (CGRF) on 30/09/2024 after receiving a dissatisfied reply from the Assistant Executive Engineer. The appellant sought a recalculation of the consumption bills from April 2024 onwards, on the basis of the average consumption of the 3 months before April 2024.

The appellant quoted Regulation 11(2) of the Tamil Nadu Electricity Supply Code 2004, which deals with the assessment of billing in cases of a defective meter, which states as follows:

“The quantity of electricity, supplied during the period in question shall be determined by taking the average of the electricity supplied during the preceding four months in respect of both High Tension service connections and Low Tension service connections provided that the conditions in regard to use of electricity during the said four months were not different from those which prevailed during the period in question.”

The appellant paid the outstanding current consumption (CC) bill for the assessment periods of 06/2024 and 08/2024 on 10/10/2024 during the course of the proceedings. Due to the late payment, additional BPSC and RC charges, alongside GST, had also been levied on the appellant, amounting to Rs. 1,021. , A new meter was also installed in the appellant’s premises on 15/10/2024.

On 24/10/24, the CGRF’s directions during the hearing, to determine the accuracy of the meter, the respondent undertook parallel testing of the meter (parallel testing involves connecting the old meter in series with a new meter, comparing the data of both meters). Upon parallel testing, it was observed that the data from the old meter matched that from the new one. Based on this, the respondent concluded that the old meter was functioning properly. Thus, a bill recalculation on the basis of regulation 11(2) was not necessary.

CGRF heard both parties' contentions and passed an order on 06/12/2024, stating that there is no need for a reassessment of current consumption from 04/2024 onwards. This was noting that the parallel testing verifies the accuracy of the old meter.

Dissatisfied by the CGRF's order, the appellant filed an Appeal Petition before the Tamil Nadu Electricity Ombudsman, praying for the recalculation and reimbursement of his current consumption bills from April 2024 onwards. The appellant further requested a waiver of the Rs. 1,021 charged against the appellant, which he contended was levied against him due to delays on the part of the respondent.

Ombudsman observed the following during the course of the hearing:

The appellant questioned the verifiability of the parallel testing of the meter. It was stated that there were no independent witnesses to verify the accuracy of the test. Furthermore, the appellant submitted that the respondent had admitted to the unverifiability of the meter's accuracy. Additionally, because of the unavailability of an MRT report, there was no way to confirm the accuracy of the meter.

The respondent contended that the appellant's meter was in perfect working condition and was replaced solely due to the inability to download meter data. It was further contended that the readings in both the meters were identical, thus validating the meter's accuracy.

The appellant further attested that he was not supplied with the report of parallel testing, nor was he mailed the CGRF order. This claim was disputed by the respondent, who asserted that the report was furnished to the appellant on 27/11/2024, and that the CGRF order was emailed to the respondent on 22/01/2025.

Ombudsman determined the following based on the submissions of the parties:

CEA (Installation and Operation of Meters) Regulations, 2006, which is empowered by the Electricity Act, 2003, read alongside regulation 26(1) of the TNERC supply code, "allows for connecting additional meters in order to ascertain the quantity of electricity consumption". Such was the procedure carried out by the respondent. Therefore, the status of the meter from the period of 04/2024 onwards was functional and normal.

The appellant cannot seek to reassess the quantum of energy consumption on the basis of past monthly average consumption. This was because it had been proved that the meter was not faulty. Therefore, the appellant is obligated to make payment to the respondent under Regulation 4(1) of the TNERC Supply Code, which allows for the levying of tariff charges on the consumer.

Based on the above findings, the Ombudsman agreed with the CGRF's orders and rejected the Appellant's claim.

SOURCE: OMBUDSMAN CASE

NEWS FROM TAMIL NADU

Ennor power plant to be expanded

After a delay of more than a decade, the 660-MW Ennore Thermal Power Station (ETPS) expansion project will soon be developed under a public-private partnership. The Tamil Nadu Electricity Regulatory Commission (TNERC) has approved the state-owned power generation corporation's petition to float a tender to build, own, and operate the plant by a private player. While the land in possession of the Tamil Nadu Power Generation Corporation (TNPGCL) will be leased to the winning bidder at the rate of 1 per hectare, the Tamil Nadu Power Distribution Corporation Ltd (TNPDCL) will buy electricity from the plant through a longterm power purchase agreement. Though the construction contract was initially issued to LANCO Infra Tech Ltd (LITL) in 2014 with a deadline to complete the project in 2018, the erstwhile Tangedco terminated the contract in 2018 as the contractor ran into financial trouble and completed just 20% of the work. In 2019, the contract to build the plant was issued to BGR Energy Systems Ltd, but five years later, that too was cancelled due to poor progress. In the public-private partnership mode, the developer will invest in the construction of the plant and maintain it, apart from selling the power to the TNPDCL. "There will be stricter norms to complete the project in time in order to meet the growing power demand in the state," said an official. TNPGCL has cited the growing power demand over and above the forecast due to economic growth in the state necessitating the project. The state's projected peak electricity demand is expected to exceed 22,000 MW in 2026-27 and 28,291 MW in 2031-32. However, retired discom official Neelakanta Pillai said that the thermal plant may be delayed further. "The site already has a coal linkage and evacuation network. Despite this, the power utility has been unable to build its own power plant. This reflects poorly on its organization," he said.

SOURCE: TIMESOFINDIA, 27 NOVEMBER 2025

NEWS FROM ACROSS THE COUNTRY

India's power demand slips 5.2% in October amid unseasonal rains: Report

India's power demand slumped 5.2 per cent year-on-year in October 2025, dragged down by unseasonal rainfall and lower temperatures that reduced the need for cooling loads, according to a power sector update by Nuvama Research. Average temperatures in October dropped to 25.6 degrees Celsius, compared to 27.1 degrees Celsius last year, cooling demand nationwide. Peak power requirement also slipped to 210 GW, down from 219 GW in October 2024. Thermal power generation was particularly affected, with the all-India plant load factor (PLF) plunging to 57.5 per-cent, marking a four-year low. NTPC's PLF declined sharply to 68 per cent from 78.1 per cent a year earlier. The report highlights that power markets saw a sharp divergence between solar and non-solar hours. Solar-hour supply surpassed demand by 422 per cent, keeping prices low at 2.2 per kWh. Non-solar-hour supply also remained elevated, pushing prices down to 3.2 per kWh, compared to 4.7 per kWh last year. India Energy Exchange (IEX)'s total electricity volume grew 16 per cent (YoY), driven by a 47 per cent surge in real-time market (RTM) transactions. Coal inventories remained higher year-on-year. All-India coal stock remained at 15.3 days as compared to 12.1 days. Power plant inventory remained at 47 million tonnes, a 34 per cent (YoY) increase. However, NTPC power plants' coal stock remained at 16 days, still below the 21-day normative requirement. India's installed power capacity reached 501 GW at the end of September 2025, with a robust 25 GW renewable addition in FY26 so far, of which solar contributed the bulk at 22 GW. Renewables now account for roughly 30 per cent of the generation mix, according to the Nuvama analysis. The report says India continues to push large-scale clean energy procurement, with a 337 GW tendering pipeline. However, nearly 44 GW of awarded bids are yet to sign power sale agreements (PSAs). Future bids may increasingly emphasise storage-backed or round-theclock (RTC) renewable supply.

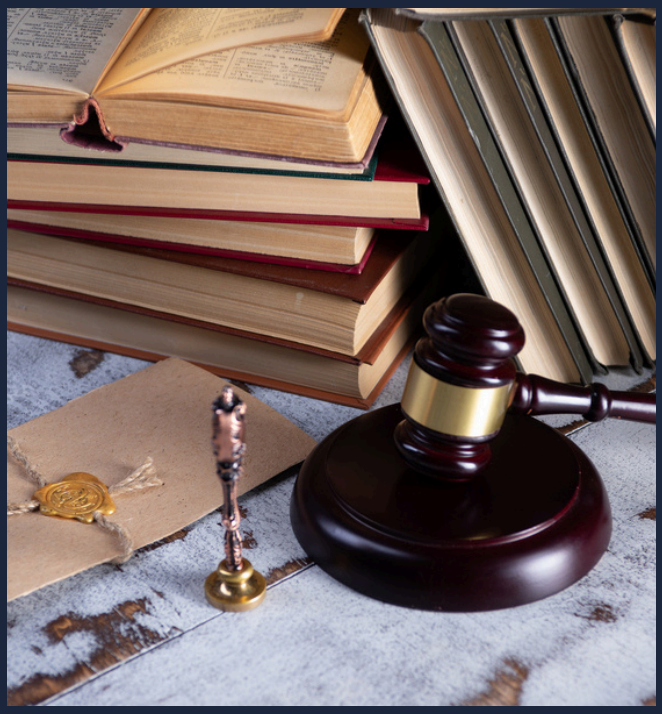
SOURCE: ECONOMICTIMES, 13 NOVEMBER 2025

WORLD NEWS

The “age of electricity” is here

The International Energy Agency’s World Energy Outlook 2025 confirms that electricity is quickly becoming the backbone of the global energy system. Electricity demand is soaring. Renewables are continuing to rise globally. But Governments are too slow in delivering the infrastructure needed to electrify industry, mobility and heating. And they need to address new supply chain risks. In November month the International Energy Agency (IEA) published its World Energy Outlook 2025 in which it claims that the world has entered the “age of electricity”. The IEA estimates that electricity demand will rise by 40-50% by 2035, driven by electrified industry, transport, digitalisation and heating. Investment in electricity supply and electrification already accounts for half of today’s global energy investment. Global investment in data centres is expected to reach $580 billion in 2025. To meet this electricity demand, renewables - wind and solar in particular - will continue to rise globally, the IEA’s Outlook states. Renewables are the fastest-growing energy source in all scenarios presented in the World Energy Outlook. The message from 2025 year’s World Energy Outlook is clear. Europe must accelerate wind energy deployment and build electricity grids that can match this buildout. Investments in electricity generation have charged ahead by almost 70% since 2015. But annual grid spending has risen at less than half that pace. Electricity connections and storage are lagging. This creates grid congestion, higher electricity prices and curtailed renewables output. Without faster permitting and investment in infrastructure, Europe will fall behind in the “age of electricity”. It will lose its position as technology leader in clean tech. And it will put its economic competitiveness at risk, as China is pushing ahead, electrifying their economies. The “age of electricity” in short: the future is electric - and renewables are leading the charge. Energy security depends on the grid.

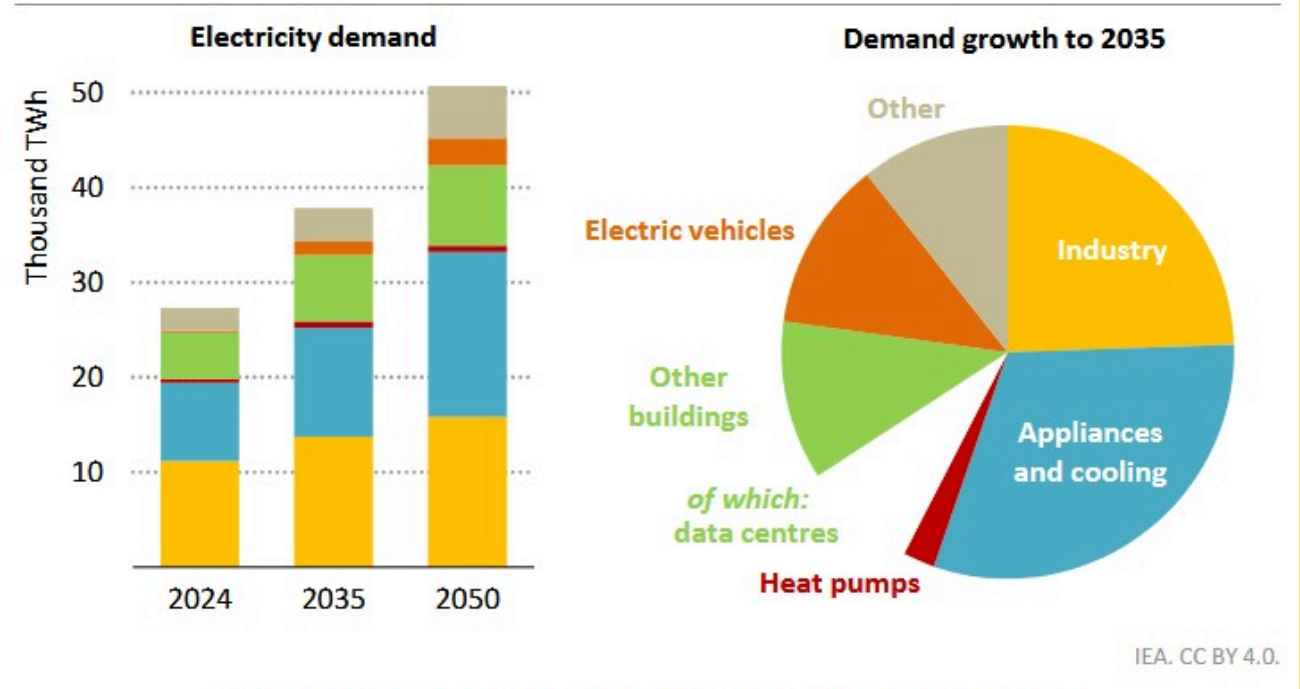
SOURCE: WINDEUROPE, 24 NOVEMBER 2025



PUBLICATIONS

- **Global landscape of energy transition finance 2025, IRENA**
- **World Energy Outlook 2025, IEA**
- **Sodium-ion batteries: A technology brief, IRENA**
- **Electricity (Amendment) Bill, 2025: Reforming the electricity sector, PIB**
- **Energy Efficiency 2025, IEA**

ELECTRICITY DEMAND BY END-USE, 2024-2050, AND DEMAND GROWTH BY END-USE IN THE CURRENT POLICIES SCENARIO TO 2035.



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