CURRENT NEWS

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SURGING SUMMER PEAK POWER DEMAND IN TAMILNADU (PART II)

MANIKANDAN

Part 1 of this edition discussed the peak power demand and need of energy storage. This edition explains what energy storage is, how it works, the status of states' energy storage projects and how storage helps the grid.

Introduction : Tamilnadu has one of India's largest installed renewable capacity of 29450 MW, yet it buys expensive power in the open market to get through peak demand months. The reason is a timing mismatch. Solar power generation peaks at midday and disappears after sunset, but the state's electricity demand climbs to its highest point in the evening hours (i.e : 6 PM to 11 PM). Thus, TNPDCL has to purchase electricity through short power exchanges at a rate of Rs. 9.50 per unit.

A publication from

CAG 40 YEARS OF ACTION
Citizen consumer and civic Action Group

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This daily gap between renewable energy availability and demand for electricity is called the "duck curve" . Energy storage is the option that closes the gap between supply of renewable power and demand. The Central Electricity Authority (CEA) estimates the State will need about 13,581 MW of energy storage (Battery + Pumped hydro) capacity by 2034-35.

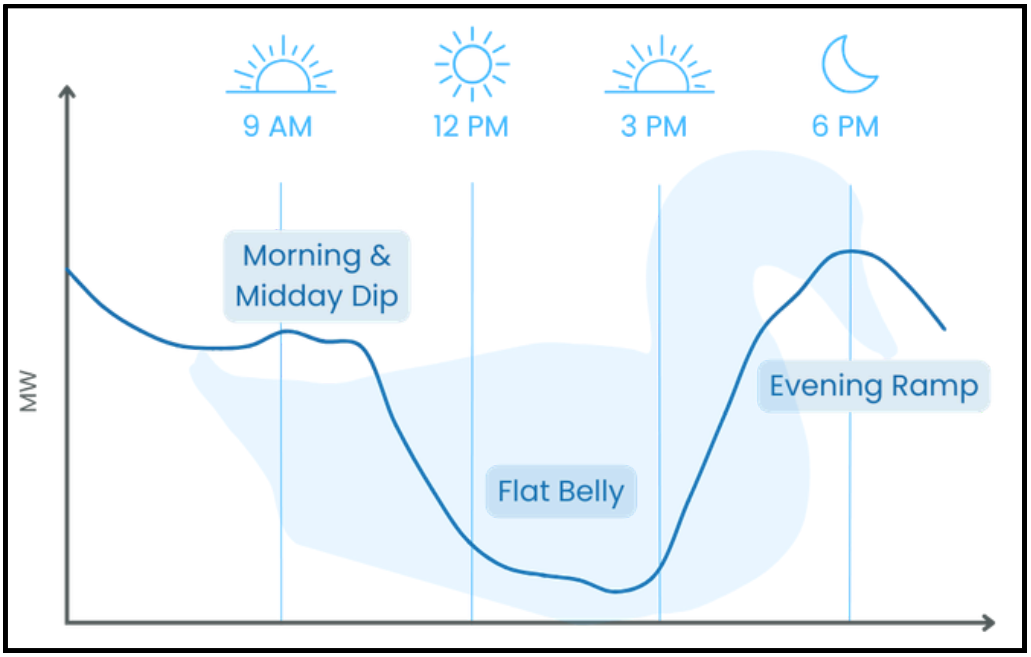


Fig 1: Illustration of Duck curve | CAG

What is energy storage ?

Energy storage is a power bank for the electricity grid. The stored surplus renewable power will be supplied to the grid during peak demand. Effective energy storage of renewable power will make clean power dependable around the clock.

How does energy storage work?

The performance of any storage is described by two terms a) Power, measured in megawatt (denoted as MW), is the maximum rate at which it can deliver electricity, b) Energy, measured in megawatt hour (MWh), is the total quantity of energy it can store and supply over time. The ratio of these two terms gives the duration. For instance, an energy storage system rated at 500 MW with 2000 MWh of energy can deliver for four hours. Tamilnadu's approved battery projects are deliberately designed around four hour discharge to meet the peak hours. Tamilnadu is presently pursuing two storage technologies at grid scale : Battery Energy Storage Systems (BESS) and Pumped Hydro Storage (PHS).

Battery Energy Storage Systems (BESS)

BESS is grid connected installations, typically built around lithium ion battery banks at substations. They charge when surplus power is available during renewable generation or low demand and discharge back into the grid at peak hours. Their advantages are speed of deployment and fast response and disadvantage is limitation in duration of supply.

State's BESS approved Projects

Tamilnadu Electricity Regulatory Commission (TNERC) has treated battery procurement as a matter of resource adequacy and grid stability. The Commission has permitted Tamilnadu Transmission Corporation (TANTRANSCO) to lease unused substation land to battery developers for a token ₹1 per project per year. Tamilnadu has emerged as one of India's frontrunners in grid scale batteries, with TNERC approved 905 MW (2500MWh) of BESS capacity across 17 substations.

Capacity (MW)	Locations	Present Status
500	Kundah, The Nilgiris	Under development, Commissioning 2026
1100	Vellimalai, Kanniyakumari	Under development
2400	Aliyar, Anamalai Hills	Under development

Table: Recent State's PHS approvals

Because these projects take years to build, TNERC approved an interim arrangement in April 2026, a four year power purchase agreement for 500 MW of pumped storage from Greenko's plant at Kurnool in Andhra Pradesh, at a fixed charge of ₹123 lakh per MW per year.

How storage helps the grid?

Energy storage helps on several fronts as follows,

1. It cuts costly market purchases
2. It reduces generated renewable energy wastage
3. It lowers dependence on thermal power at peak
4. It improves reliability of supply

Conclusion

Tamilnadu has adopted a phased approach to energy storage deployment. It has approved about 905 MW of grid scale batteries across 17 substations and is building a larger PHS of over 4 GW along the Western Ghats in the state. Storing the renewable power and dispatching it in peak hours costs about ₹6.16 per unit against market purchase rates near ₹10 per unit. The wider benefits will be lower curtailment, reduced peak hour thermal power dependence and more reliable supply to consumers. Thus, energy storage will become the backbone of the State for a cleaner, more reliable and cost effective power system.

CONSUMER FOCUS

The Appellant, a domestic consumer, received an electricity bill of Rs. 4,850/- during June 2024. The domestic consumer found the bill unusually high for his regular consumption pattern. Based on this, the consumer filed a complaint with the TNPDCL seeking clarification. Based on the complaint, the TNPDCL inspected the consumer's premises and found that the meter was defective. Since the meter could not record actual consumption, the June 2024 bill was assessed on an average basis in accordance with the TNERC Supply Code. TNPDCL informed the consumer that the defective meter would be replaced and that future billing would thereafter be based on the new meter.

Subsequently, the defective meter was replaced on 03.08.2024, and a revised bill for the defective meter period was also issued for Rs. 2,208/-. Although the consumer paid both bills, he disputed the method adopted for calculating the average consumption. The consumer pointed out that TNPDCL had arrived at an average consumption of 830 units by considering two previous billing periods in which consumption was 880 units (June 2023) and 777 units (August 2023). According to him, these months did not represent his normal electricity usage because additional family members were staying in the house during that period, resulting in unusually high consumption.The consumer believed that his bill should have been arrived at, under Regulation 11(5) of the TNERC Supply Code which permits the licensee to assess consumption based on another comparable four-month period when the preceding months do not reflect similar usage conditions. He therefore requested reassessment using a representative consumption period. Understanding Regulation 11, TNERC Supply Code: To better understand the dispute, it is useful to distinguish the different methods of assessment provided under Regulation 11,TNERC Supply Code.

Regulation	What it says	When it should be used
11(2)	Bill the consumer based on the average consumption of the preceding four months.	This is the default method, provided those months represent normal electricity usage.
11(4)	Bill the consumer based on the average consumption of the succeeding four months after the correct meter is installed.	Applies only where the meter becomes defective immediately after a new service connection is effected.
11(5)	If the preceding or succeeding months are not representative, another four-month period with similar usage conditions may be selected.	This is an exception to avoid unfair averaging where the default period does not reflect normal consumption.

The Respondent, however, took the view that this was a standard defective meter case and that Regulation 11(2) requiring the average consumption of the preceding four months appropriate for this case. TNPDCL, therefore did not consider it necessary to invoke the exception provided under Regulation 11(5). Dissatisfied with the Respondent's response, the consumer filed a petition to the Consumer Grievance Redressal Forum (CGRF) seeking reassessment of the defective meter period and adjustment of the excess amount paid. During the CGRF hearing, the consumer reiterated that the preceding billing periods were not representative of his normal consumption and sought reassessment under Regulation 11(5) of the TNERC Supply Code. The Respondent maintained that the assessment had been correctly made under Regulation 11(2).

In its order, the CGRF referred to Regulation 11(4) of the TNERC Supply Code and held that the provision applies only where a meter becomes defective immediately after a new service connection is effected. Since the consumer's service connection had existed since 2013, the CGRF held that Regulation 11(4) was not applicable and concluded that the Respondent's assessment was in accordance with the applicable provisions. While the Appellant's grievance centred on the representativeness of the consumption period used for averaging, the CGRF's order primarily addressed the applicability of Regulation 11(4) and did not expressly examine whether the conditions for invoking Regulation 11(5) had been satisfied. Aggrieved by the CGRF's decision, the consumer filed an appeal before the Electricity Ombudsman. During the Ombudsman hearing, the consumer did not appear and requested that the case be decided based on the documents submitted. The Respondent reiterated that the assessment had been correctly carried out under Regulation 11(2).

Upon examination of the records and submissions, the Ombudsman observed the following:

- Regulation 11 provides different methods of assessment for defective meters depending upon the circumstances. However, the Ombudsman also observed that a consumer seeking reassessment under Regulation 11(5) must establish that the consumption during the period used for averaging was materially different from normal usage.

The Ombudsman observed that although Regulation 11(5) permits assessment based on another comparable period where the preceding months do not reflect similar usage conditions, the consumer had not produced documentary evidence to establish that the earlier high-consumption months were not representative of his normal electricity usage or to identify another comparable four-month period. The Ombudsman therefore concluded that there were insufficient grounds to depart from the default method prescribed under Regulation 11(2).

Based on the above observations, the central issue before the Ombudsman was not the legality of average billing itself, but whether the facts of the case justified invoking the exception under Regulation 11(5) instead of the default rule under Regulation 11(2). The Ombudsman arrived at the following findings:

- The consumer failed to establish that the usage conditions during the relevant period were materially different from those considered for averaging, due to lack of supporting evidence.
- The method adopted by the Respondent, i.e., average based on preceding consumption under Regulation 11(2), is valid and in accordance with the TNERC Supply Code.

"(2) 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 alternative method under Regulation 11(5) cannot be applied in the absence of clear identification and proof of similar usage periods.

If the conditions in regard to use of electricity during the periods mentioned above were different, an assessment shall be made on the basis of any consecutive four-month period during the preceding twelve months when the conditions of working were similar to those in the period covered by the billing.

Based on the analysis, the Ombudsman dismissed the appeal and upheld the CGRF's decision, confirming that the billing for the defective meter period was correctly carried out as per the applicable regulations.

Consumer Takeaway:

This case highlights that consumers are entitled to question how an average bill has been calculated during a defective meter period. If the previous billing periods do not represent normal electricity usage – for example, due to temporary occupancy, prolonged absence, seasonal variations, or unusual consumption – they may request assessment under Regulation 11(5) using another comparable period.

SOURCE: OMBUDSMAN CASE

NEWS FROM TAMIL NADU

TN Chief Minister set to review TNEB's finances ahead of tariff hike

Chief Minister C Joseph Vijay is likely to chair a high-level review meeting on the financial position of the Tamil Nadu Electricity Board (TNEB) at the secretariat on Monday, amid mounting debt and rising operational expenditure in the state power sector. The meeting comes days after C T R Nirmal Kumar was allocated the electricity portfolio in the new cabinet. According to official sources, the TNPDCL is now preparing for the next tariff revision scheduled to take effect from July 1 this year. Senior officials are expected to discuss the proposed tariff hike and its financial implications with the CM during the review meeting. Sources said that senior officers from the state's power distribution, generation, transmission and green energy corporations are expected to present detailed reports on the financial health of their respective entities. The presentations are likely to cover liabilities, interest burden, revenue generation, expenditure, subsidy commitments and ongoing infrastructure projects. Officials said the TNEB liabilities for 2025-26 may have increased by around 6% to 10%, largely due to private power purchases. As per the 16th annual report (2024-25) of the Tamil Nadu Power Distribution Corporation Limited (TNPDCL), the corporation's non-current liabilities stood at Rs 1.18 lakh crore, while current liabilities were Rs 80,074 crore. Similarly, the Tamil Nadu Power Generation Corporation Limited (TNPGCL) recorded non-current liabilities of Rs 62,446 crore and current liabilities of Rs 60,780 crore in 2024-25, underlining the growing financial strain on state-run power utilities. TNPDCL follows the Multi-Year Tariff Framework approved by the Tamil Nadu Electricity Regulatory Commission, which provides for annual automatic tariff revision linked to inflation based on the Consumer Price Index (CPI) to meet the revenue requirements of the discom.

SOURCE: THE NEW INDIAN EXPRESS, 18 MAY 2026

NEWS FROM ACROSS THE COUNTRY

India's energy investment to hit $170 billion in 2026 on solar, grid and refining push: International Energy Agency

India's energy investment is set to reach a record $170 billion in 2026, driven by rapid expansion in solar power and oil refining as the country accelerates efforts to meet rising energy demand and strengthen infrastructure for its clean energy transition. The International Energy Agency (IEA), in its World Energy Investment 2026 report, said energy investment in India has grown at an average annual rate of 11% over the past five years, with solar photovoltaic (PV) investment rising 25% annually and oil refining investment growing 23% over the same period. Together, the two sectors accounted for roughly a quarter of the increase in overall energy spending. Coal continues to dominate India's energy mix, underpinning both power generation and industrial demand. Investment in coal supply is expected to reach $13 billion in 2026, as India seeks to raise domestic coal production to 1.5 billion tonnes by 2030 from around 1 billion tonnes currently. Investment in coal-fired generation has meanwhile fallen to around 40% of its 2010 peak. India now invests three dollars in renewables and nuclear power for every dollar spent on fossil fuel-based generation, up from 1.5 dollars five years ago. The country is also ramping up spending on grid modernisation, battery storage and dispatchable power generation to support rising renewable penetration. Solar and wind now account for more than half of India's installed generation capacity, increasing the need for transmission upgrades and storage systems to manage intermittency and avoid renewable curtailment. "Energy investment in India has grown 11% annually on average in the past five years and is set to reach $170 billion in 2026. Investment in solar PV grew annually by 25% in this period, and oil refining by 23%. Together, these two sectors contributed to one-fourth of India's energy investment growth," it said. Sharp rises in solar PV and wind investments have taken their share to over 50% of installed capacity in India.

SOURCE: THE HINDU, 28 MAY 2026

WORLD NEWS

Global wind and solar power outpace gas for first time in April, report shows

Wind and solar combined generated more electricity than gas globally in April for the first month ever, data analysed by UK-based think tank Ember showed on Thursday. Ember said the move was a broader trend rather than a reaction to soaring fossil fuel prices following the Iran conflict, but added it comes at a time when wind and solar generation is helping reduce reliance on gas imports for many countries hit by the crisis. Together, wind and solar generated 22% of global electricity in April, compared with 20% from gas.

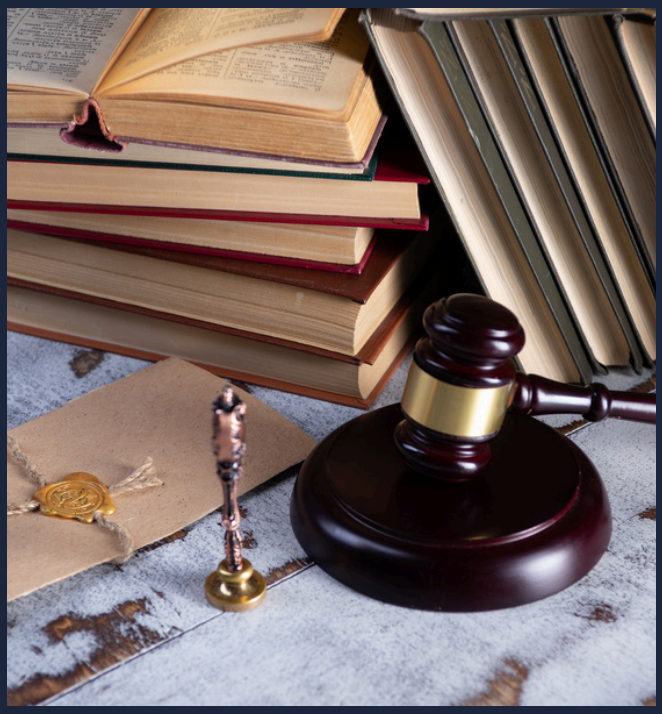
"The current energy crisis has further strengthened the economic case for renewables compared to imported gas, while also adding greater political urgency to accelerate deployment," said Kostantsa Rangelova, global electricity analyst at Ember.

April is often a strong month for renewables as spring conditions in the Northern Hemisphere - where most global solar capacity is concentrated - typically combine strong wind output with rising solar generation.

Globally, combined wind and solar output is estimated to have grown 13% year-on-year, with gains in several markets including China (+14%), the European Union (+13%), Britain (+35%), the United States (+8%), Australia (+17%), Chile (+24%) and Brazil (+4%).

The analysis is based on reported data from 36 countries and uses conservative estimates for countries yet to publish April figures.

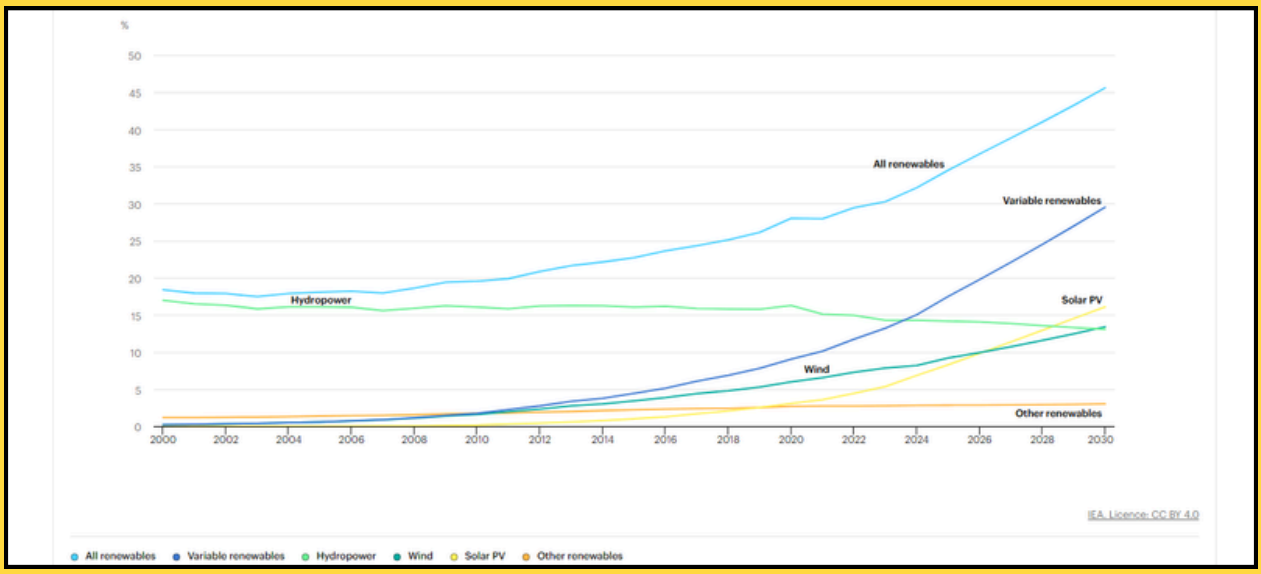
SOURCE: REUTERS, 21 MAY 2026



PUBLICATIONS

- **24/7 renewables: The economics of firm solar and wind, IRENA**
- **New Energy Outlook 2026, BloombergNEF**
- **Transitioning away from fossil fuels: A roadmap based on renewables, electrification and grid enhancement, IRENA**
- **Ultra-fast charging batteries, IEA**

SHARE OF RENEWABLE ELECTRICITY GENERATION BY TECHNOLOGY, 2000-2030



SOURCE: IEA

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No.103 (First Floor), Eldams Road, Teynampet, Chennai-18