

All you need to know about electricity safety regulation (Part-5)

The [previous issue](#) explained a case study which outlined general safety measures that can be taken by consumers. This editorial will discuss the precautionary measures and safety conditions relating to use of electricity.

Case Brief: A domestic consumer assigned a local electrician to attend to the non-burning of lights in his service connection. An electric pole near by his house has a low tension wire connecting to his house and there is a High Tension(HT) line also passing on top of it. Based on his inspection, the electrician found that the fault was with the wire connecting to the overhead Low Tension(LT) line. To work on the overhead LT line, the [Air Breaker](#) (AB) switch installed in the LT pole has to be switched OFF. When the AB switch is turned off, there will be a power cut in the consumer's premises. Accordingly, the electrician switched off the Air Breaker pertaining to the consumer's service connection without informing the utility. During the course of work, he made physical contact with the HT line which was above his head, got electrocuted and died on the spot.

What caused the accident: The clearance space between the LT wire line and the HT wire line was too low (below 1 meter) and hence did not meet the standards prescribed in the Central Electricity Act (CEA) regulations. An earth guarding protective device was not installed to the electric pole. A non departmental person should not have attended the fault without informing the utility, he lacked knowledge of safety measures to be taken before working with power lines.

What does the rule say: CEA ([Measures relating to safety and electric supply](#)) Regulation 62, Conductors at different voltages on same supports says "Where conductors forming parts of systems at different voltages are erected on the same supports, the owner shall make adequate provision to guard against danger to linemen and others, from the lower voltage system being charged above its normal working voltage, by leakage from or contact with the higher voltage system and the methods of construction".

CEA ([Measures relating to safety and electric supply](#)) Regulation 69(iv), Lines crossing or approaching each other and lines crossing street and road says "where an overhead line crosses another overhead line, clearances shall be a minimum of 2.44 meter for the low and medium voltage".

Key takeaways:

- Consumers should be informed not to engage unauthorised (non-departmental) persons for such works. This information should be widely publicised in order to create awareness among the consumers
- Whenever HT / LT lines are on the same side, the utility should erect 30 feet poles in order to ensure there is adequate clearance.
- A Caution(danger) Board must be displayed for HT / LT lines crossing on the same pole/support.
- Proper guarding arrangements should be made.

(To be continued)

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CAG's Experience at Grievance Day Meetings conducted by TANGEDCO

[Consumer Grievance Day meetings](#) are held by the Superintending Engineer, Tamil Nadu Generation and Distribution Company (TANGEDCO), once a month in each division of the circle. Consumers can get their grievances redressed at the grievance day meetings. The meetings are vital to ensure consumers in the division are able to resolve their grievances quickly. CAG participated in 2 grievance meetings; the grievance day meeting for the residents of Adyar on May 5 2022, at 110 kW Taramani EB substation at 10:30 AM and the grievance day meeting for the residents of Egmore on May 6 2022, Malaiappan Street at 11:00 AM.

We observed some issues in the meetings and have proposed recommendations to overcome the same.

Issue 1: Timing

The meetings have been conducted in the time between 10:00 AM and 3:00 PM on weekdays. It is clear that this time slot is the primary reason why there are barely any consumers attending the meetings. It is safe to assume that most consumers will be engaged in their own work during this time because these are standard office working hours. Consumers will find it difficult to leave their work for a day in order to take part in the meeting. It is recommended that the meetings must be held during the weekend- Saturdays or Sundays. There will be more consumer participation during these days. The Chennai Metropolitan Water Supply and Sewerage Board conducts [Open House Meetings](#) every second Saturday of the month. A similar schedule for the TANGEDCO Grievance Day meetings will benefit the consumers. It is submitted that the notice of the meeting should include the address of the office where the meeting is held, the contact information of the person in charge, etc.

Issue 2: Publicity

It was observed that notice of the meeting was not displayed at or by the concerned office. Furthermore, an online news item of the same was done only one day prior to the meeting by newspapers ([Egmore](#), [Perambur](#) and [Adyar](#)). It is observed that only a few meeting notices are published at the last minute, and various grievance days are conducted without any publication. Thus, consumers are not aware of the meetings and fail to attend the same. It is recommended that notice must be published in both print and digital media at least one week in advance (in both English and Tamil) and the notice of the meeting should be displayed prominently in the concerned office (near the billing counter, etc.). It is also proposed that notice of the meeting can be sent through SMS to the registered users in that division.

Issue 3: Complaint registration

It is observed that during the grievance day meeting complaints are accepted, and details are taken down in a register along with the signature of the aggrieved consumer. It is proposed that an acknowledgement number must be given to the consumer so that he/she is able to track and seek updates on the registered complaint with ease. It is also recommended that Distribution Standards of Performance Regulations must be adhered to while accepting and resolving these complaints.



The monthly grievance day meetings are proving to be ineffective due to the above-stated reasons. These simple steps can help the consumers participate and benefit effectively from the monthly meetings. Consumer participation is key for TANGEDCO to recognise the areas where the quality of service is affected. These meetings foster a friendly environment and can be the bridge between the consumer and TANGEDCO.

Tamil Nadu News

Erumaparai tribal settlement will soon become the first tribal settlement in the Anamalai Tiger Reserve (ATR) to get a power connection

After several decades of waiting, Erumaparai tribal settlement near Top Slip will soon become the first tribal settlement in the Pollachi Forest Division of the Anamalai Tiger Reserve (ATR) to get power connection.

According to ATR authorities, various formalities have been completed and 34 Kadar tribal families are expected to get power connection within a month. On Wednesday, senior officials from the Tamil Nadu Generation and Distribution Corporation (Tangedco) inspected the settlement which is situated within the limits of Ulandy forest range of ATR.

“A high voltage power line is passing through the locality. Tangedco will install a step-down transformer to convert the voltage for the use of the tribal families,” said S. Ramasubramanian, Conservator of Forests and Field Director of ATR. He said that the Tangedco will use concealed cables to supply power to the tribal settlement from the high voltage main line for the safety of wild animals and people.

Mr. Ramasubramanian and M.G. Ganesan, Deputy Director of ATR (Pollachi division) conducted multiple visits to speed up the formalities and aid the tribal families. Ulandy forest range officer A. Kasilingam said that there are 18 tribal settlements within the limits of the Pollachi division of ATR and the families are depending on solar-powered lights.

“At present, the residential middle school for tribal children at Top Slip has power connection where hostellers can study at night. Day scholar students are deprived of proper lighting to study at night. Soon, students from Erumaparai will be able to study at night as electricity will light up their residences,” he said. ATR officials are also in the efforts of bringing power connections to other tribal settlements where families have been issued homestead patta.

Source: [The Hindu](#), April 06, 2022

India News

Maximum All India Power demand met on April 2022

The Ministry of Power on Tuesday stated that the maximum all-India power demand met was recorded at 201.066 GW as on today (26 April, 2022). It has surpassed last year's maximum demand met of 200.539 GW, which occurred on 7 July 2021, it stated. The rising power demand reflects the economic growth in the country, the ministry said. In the month of March this year, the growth in energy demand has been around 8.9 per cent. Further, the demand is expected to reach about 215-220 GW in months of May-June, it added.

"The government and other stakeholders are working together to ensure unhindered power supply and efforts at all fronts are being made and measures are being taken for better utilisation of various resources," the ministry said in a statement. Meanwhile, on Monday, Union Power Minister R K Singh had met Railways Minister Ashwini Vaishnaw to discuss higher availability of rakes for the power sector for increasing coal supply to thermal plants amid rising electricity demand in the country.

Thermal power plants, especially those far from coal mines, are grappling with low coal stocks even as power demand has surged due to soaring temperatures. The power ministry in a statement said that R K Singh and Vaishnaw held a meeting to discuss short-term and long-term strategies for dealing with increasing power demand. The ministers also discussed increasing operational efficiency for loading and unloading of coal, increasing percentage of rakes allotment for the power sector, and other logistics issues, the release had added.

Source: [business today](#), April 26, 2022

Consumer Focus

The appellant has filed this complaint seeking to direct the Assistant Engineer (AE) not to erect the pillar box on the front side of his building as it may cause damage to his property. The pillar box in question was initially installed on the eastern side of the adjacent property. The appellant argued that the neighbours held some personal vengeance against the appellant and used their 'high influence' to relocate the pillar box and install it in front of the appellant's house. The appellant also submitted that they had legal suits regarding property, pending against their neighbours. The appellant submitted that the new proposed place would obstruct their frontage and cause damage to the property. He has given a complaint to the concerned AE for the same, on receipt of the complaint, the concerned Executive Engineer (EE) visited the site on 18.10.2021. The respondent stated that they had inspected the site and explained to the appellant the work progress in that area.

Not satisfied with the reply of the respondent, the appellant filed a petition with the Consumer Grievance Redressal Forum (CGRF) on 18.10.2021. The CGRF issued its order on 22.12.2021. The CGRF observed that the EE explained the need for erecting a pillar box and hence dismissed the petition without any orders. Aggrieved by this order, the consumer filed an appeal before the Ombudsman on 19.01.2022. Meanwhile, the respondent over the phone scheduled a meeting at the concerned office on 17.02.2022 to resolve the pillar box issue. Subsequently, the site was inspected on 17.02.2022 by the respondent along with the appellant. After this meeting, AE was instructed to erect the pillar box between the appellant and his neighbour's plots. It was claimed that the appellant also accepted and requested to execute it. In addition to this, the respondent argued that as per [Indian Telegraph Act](#), the Distribution License, TANGEDCO, was empowered to provide Distribution Networks in Public places.

In objection to this, the appellant submitted that he never accepted to erect the pillar box between his and his neighbour's property. In light of the facts of the case, arguments put forward and the statutes relied upon, the Ombudsman noted that the original location proposed by the respondent is on the public road, which is outside the compound wall, on the eastern side of the property of the neighbours. The Ombudsman observed that TANGEDCO is empowered to erect poles and lay electric lines on public roads/place as per [Indian Telegraph Act, 1885](#), but it failed to understand that the same Act holds good for the original location also. The respondent cannot apply the Act selectively. TANGEDCO officials failed to justify or give reasonable cause as to why the first location was being rejected. Hence, the appellant's prayer was granted through the following order:

- A. The Ombudsman directed the respondents to erect the electric pillar box on the eastern side of the neighbour's property at the location proposed originally.
- B. Ombudsman further ordered that the above work shall be completed within 45 days from the date of receipt of this order and a compliance report shall be sent to the Electricity Ombudsman within 15 days after completion of the work. Ombudsman disposed of the case, with no costs.

Source - [Ombudsman Case, TNERC](#)

ECC VOICE

திருவண்ணாமலை மாவட்டம் , புத்தூர் சடையனோடை கிராமத்தில் வசிக்கும் திரு. துரை . தங்கள் ஊரில் உள்ள ஓடை கரையின் அருகில் இருக்கும் மின்கம்பத்தில் இருக்கும் மின்கம்பிகள் மிகவும் தாழ்வாக இருப்பதால், அதனை சரி செய்து தரும்படி மின்வாரிய அலுவலகத்தில் பல முறை மனு கொடுத்துள்ளார் . ஆனால் அவருக்கு சரியான பதில் கிடைக்கவில்லை. அப்பொழுது, திருவண்ணாமலை மின் நுகர்வோர் மையத்தின் விழிப்புணர்வு கூட்டத்தில் நுகர்வோருக்கான விழிப்புணர்வு விபரங்களை அதன் மின் ஆலோசகர் திரு. ஆனந்தன் விவரித்தார். அவரிடம் திரு. துரை இந்த பிரச்சனையை ஒரு புகாராக அளித்தார். மின் ஆலோசகர் திரு. ஆனந்தன், கிராமம்-1/திருவண்ணாமலை மின்வாரியத்தின் உதவி பொறியாளரை தொலைபேசி மூலம் தொடர்பு கொண்டு, இப்புகாரினை விவரித்தார். பிறகு சம்மந்தப்பட்ட அதிகாரிகள் ஒருவார காலத்தில் மின்கம்பிகளை மாற்றி அமைத்தனர். துரிதமாக செயல்பட்ட மின் வாரியத்திற்கும் மற்றும் மின் நுகர்வோர் மையத்திற்கும் திரு. துரை தங்கள் நன்றியினை தெரிவித்தார்.

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Citizen consumer and civic Action Group (CAG) is a non-profit, non-political and professional organization that works towards protecting citizen's rights in consumer and environmental issues and promoting good governance processes including transparency, accountability and participatory decision making.

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World News

Capturing Solar Energy and Converting It to Electricity When Needed – Up to 18 Years Later

A novel technology to capture solar energy, store it for up to 18 years, and release it when and where it is needed has been developed by researchers at Chalmers University of Technology, Sweden. They initially demonstrated how captured solar energy can be extracted as heat and now they succeeded in getting the system to produce electricity, by connecting it to a thermoelectric generator. This is a historical move in the world of green energy (emission-free and renewable); this technology has opened the doors to utilise solar energy to generate electricity at any place and any time.

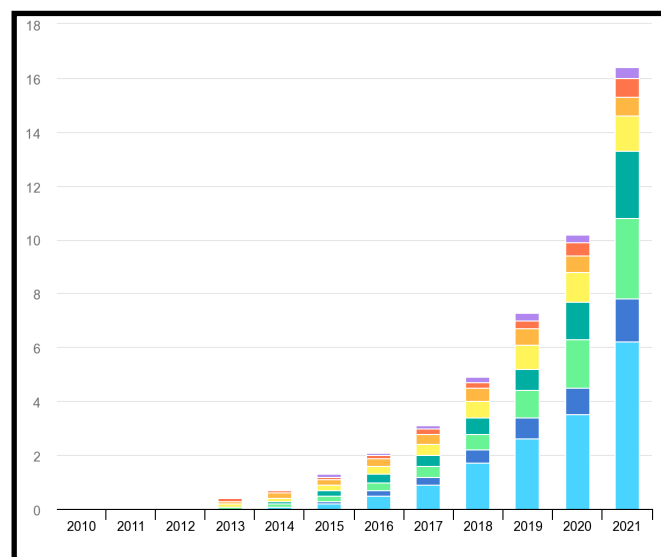
Molecular Solar Thermal Energy Storage Systems (MOST) is a closed energy system based on a specially designed molecule of carbon, hydrogen and nitrogen, which when hit by sunlight changes shape into an energy-rich isomer – a molecule made up of the same atoms but arranged together in a different way. The isomer can then be stored in liquid form for later use when needed, such as at night or in winter. The researchers have refined the system to the point that it is now possible to store the energy for up to 18 years. A specially designed catalyst releases the saved energy as heat while returning the molecule to its original shape, so it can then be reused in the heating system. Now, in combination with a micrometre-thin thermoelectric generator, the energy system can also generate electricity to order. With MOST, factors like weather, location and time of the day will no longer limit the use of solar energy. Nevertheless, a lot of research and development remains before the system's stored solar energy.

Source: SciTechDaily, April 18, 2022

Publications / Regulations

- Grid Codes for Renewable Powered Systems, April 2022, IRENA
- Global Hydrogen Trade to Meet the 1.5°C Climate Goal: Technology Review of Hydrogen Carriers, April 2022, IRENA
- Procedure for Short Term Open Access in inter-State Transmission System through National Open Access Registry (NOAR), April 2022, CERC
- Biogas Plant Installation under MGNREGA, April 2022, MNRE

Global electric car stock, 2010-2021



Source: IEA