

Energy Access and Gender roles (Part-2)

The previous [issue](#) introduced the significance of gender roles in energy access and policy making. This issue will highlight how energy access for cooking is connected to domestic productivity for women.

Time use & productivity: Time is a limited and finite resource. Although each of us have the same time budget of 24 hours per day, time use patterns largely determine our productivity and wellbeing. A higher amount of [leisure time](#) has been identified to increase productivity and promote wellbeing.

When we look at the time use patterns amongst Indians, the most glaring concern is the [gender-gap](#). Most Indian women's time use patterns reflect lesser leisure and more cooking in comparison with their male counterparts. On the one hand with lesser time for leisure, an average Indian woman's productivity and wellbeing suffers. On the other hand, when women have limited to no time to spare for activities other than cooking and household chores, their ability to otherwise contribute financially for the household is reduced.

Indians & cooking: Indians spend over [13 hours](#) a week in the kitchen and this cooking time is largely clocked by the country's women. A [2015 survey](#) revealed that people who cook in India spend twice as much time as the amount of time spent by people from the rest of the world.



Source: Canva

An average Indian's cooking time was observed to be under six and a half hours a week. A closer look at cooking time spent across different groups of people reveals a highly disproportionate burden. While men who cook only spend around 5 hours a week in the kitchen, women who cook spend over 14.2 hours a week in the kitchen. The gender-gap can be seen as more pronounced and skewed in rural India.

The subsequent issues focus more on cooking in rural India from a gender perspective and highlight the role and impact of access to clean energy.

(To be continued)

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All you need to know about electricity safety regulations (Part-2)

This [previous issue](#) focused on the first step towards ensuring electrical safety i.e. learning about electricity safety regulations. This issue will highlight key aspects of the central electrical safety regulations along with a case study that elucidates the same.

Safety measures to be followed while effecting a new electricity connection as per *Chapter III of Central Electricity Authority's "Measures relating to Safety and Electric Supply Regulations, 2010"*:

- ◆ The materials such as the wires, meters and other required materials provided by the supplier (TANGEDCO) should follow the standards prescribed in the Bureau of Indian Standards.
- ◆ Consumers should install copper wires for their service connections, which are of adequate size to carry the full load current to the connection.
- ◆ The electrical equipment's such as wires and other materials should be installed above the Mean Sea Level (MSL).
- ◆ No building should be constructed under an existing overhead line.
- ◆ If the consumer is looking to install the equipment in the basement, the consumer should ensure that the basement design is such that there is no seepage or leakage or logging of water in the basement.
- ◆ The consumer should install an earthing terminal in the meter board.
- ◆ After effecting a new service connection, the consumer should ensure that the meter and wires under his control are maintained in a safe condition. The service lines installed by the supplier on the premises, should be insulated and protected by the supplier as to be secured under all ordinary conditions against electrical, mechanical, chemical damages.
- ◆ Any work within the consumers' premises including additions, alterations and adjustments to the existing installation should be carried out after the prior permission given by the supplier (TANGEDCO)
- ◆ No person other than supplier shall interfere with service lines and apparatus placed by the supplier on the premises of the consumer

Case study - Electrical Safety for Homeowners

Case brief:

A domestic consumer had constructed his new house underneath a 11 KV overhead line. Following an inspection, the concerned official from TANGEDCO had issued warning notices to the consumer stating that clearance between the 11 KV line and the roof was inadequate. Despite knowledge of the inadequate clearance, the homeowner had not closed the way to the roof. His negligence resulted in the electrocution of his child who accidentally touched the overhead line while playing on the roof.

What caused the accident?

The clearance between the terrace and the 11kv line was too low and did not meet the standards prescribed in the Central Electricity Act (CEA) regulations. Although the consumer was warned by TANGEDCO, the consumer did not take necessary safety measures.

What does the rule say?

CEA, Regulation 61, Clearances from buildings of lines of voltage exceeding 650 Vsays an overhead line shall not cross over an existing building as far as possible and no building shall be constructed under an existing overhead line. When an overhead line of voltage, exceeding 650 V passes above or adjacent to any building or part of a building it shall have on the basis of maximum sag a vertical clearance above the highest part of the building immediately under such line, of not less than 3.7 meters

Key takeaways:

- ◆ Consumers should enclose the planning permission / building plan approval along with the application for new service connection
- ◆ Distribution company should strictly enforce the CEA safety regulations and ensure that precautionary measures are taken; failing which, the service connection should not be effected
- ◆ Such accidents should be widely publicised in order to create awareness around the importance of providing electrically safe construction spaces

(To be Continued)

Tamil Nadu News

More charging points for electric vehicles soon across TN

If you use an electric vehicle (EV) or plan to, your dream of doing long trips is now closer to reality. Public charging stations (PCS) soon won't just be at Metro stations, as the Tamil Nadu Generation and Distribution Corporation (TANGEDCO) plans to set them up across the State. "The Central government had given instructions to set up PCS in 2020, but this wasn't possible due to the pandemic. We are now preparing a new tariff for PCS, and waiting for the Tamil Nadu Electricity Regulatory Commission's (TNERC) approval," said a senior TANGEDCO official.

Presently, TANGEDCO charges Metro stations for PCS usage based on the existing commercial tariff. The Centre had said PCS should be set up every 25 km on both sides of highways, and TANGEDCO is working to implement this, the official added. On January 14, the Ministry of Power said the corporation can invite young entrepreneurs to set up PCS. Explaining the need for more PCS, G Veeramani, a resident of Chinmaya Nagar in Chennai, said, "I can ride up to 50 km if I charge by two-wheeler for seven or eight hours. Within the city, I can charge it at Metro stations for Rs 10 per hour, but long rides are impossible since there are no charging stations on national highways. More people would buy EVs if this issue is resolved."

Veeramani's two-wheeler has a lead-acid battery and can travel up to 30 kmph. He bought it in 2019 for Rs 52,000, and the model's on-road price is now Rs 79,000. "Now, that the Union government has issued new guidelines for charging stations. TANGEDCO should use it as an opportunity to generate revenue by setting up PCS. To avoid power fluctuations and failures, they should be set up within substations on national highways and in the city limits," Nadarajan said.

Source: [TNEI](#), January 27, 2022

India News

Households free to install rooftop solar by any vendor under govt scheme: MNRE

The Ministry of New & Renewable Energy on Friday said households are free to get rooftop solar panel installed by themselves or by any vendor of their choice and a photograph of the installed system for distribution utility is sufficient to avail benefits or subsidy under the government scheme. Earlier under the rooftop solar scheme, the households were required to get that from the listed vendors only to avail the benefits and subsidy under the scheme. The decision to simplify the rooftop solar scheme was taken in a review meeting chaired by Union Minister of Power and New & Renewable Energy R K Singh on January 19, 2022, as per a statement by the ministry. According to the statement, after the review, the minister gave directions for simplifying the Roof Top Scheme, so that the people are able to access it easily.

He has directed that henceforth, it will not be necessary for any household to get the rooftop solar panel installed by any of the listed vendors. The households may also install the rooftop solar panel by themselves or get the rooftop solar panel installed by any vendor of their choice, and inform the distribution company about the installation along with a photograph of the system, which has been installed, the statement said. In order to ensure that the quality of the solar panel and the inverter is according to the prescribed standard, the central government will publish from time to time the lists of solar panel manufacturers and inverter manufacturers whose products meet the expected quality standards and the price lists thereof; The option of getting the rooftop solar panel installed by any of the vendors designated by the Discom remains available as earlier. In such cases also, the householder may select the solar panel and inverter of his choice, according to the statement.

Source: [TheEconomicTimes](#), January 21, 2022

Consumer Focus

The petitioner owns agricultural land. TANGEDCO officials erected an electric pole and a transformer on his land, without his approval. The petitioner raised a complaint with the Assistant Engineer (AE) on 24.02.2020 requesting the officials to shift the electric pole and transformer from his land. The petitioner also lodged his complaint with the Assistant Executive Engineer (AEE), Executive Engineer (EE), Superintending Engineer (SE) and the Chief Engineer on 26.02.2020. Based on the complaint, on 02.03.2020, the AE inquired the petitioner about the Field Measurement Book (FMB) and the ownership details of the land. Subsequently, the EE informed the petitioner that the pole will be shifted along with the transformer. He assured the petitioner that the shifting would be completed soon, especially since the pole was erected without connecting lines. On the contrary, the electric lines related to the transformer were connected on 13.03.2020. The petitioner was unaware of this until the following day since he stayed 30 km away from the place.

Considering this, on 16.03.2020, the petitioner filed a complaint with [Consumer Grievance Redressal Forum \(CGRF\)](#) to take necessary action against the Assistant Engineer and Executive Engineer for erecting the pole and transformer even after his objection. CGRF held the hearings on 16.06.2020, 25.08.2020, 10.09.2020 and 28.10.2020. However, CGRF had not passed any orders on the case so far. Hence the petitioner appealed to the [Electricity Ombudsman](#) seeking that the electric pole and transformer be shifted from his land and further demanding a maximum compensation of Rs. 2,50,000 for the mental agony caused. During the hearing, the TANGEDCO officials stated that they had approached the Tehsildar to survey the land and requested a field audit report from the surveyor. Owing to the delay in response, the officials approached the District Revenue officer to follow up on the request. TANGEDCO officials eventually received a field audit report from the Tehsildar which stated that the electric pole was erected in the Govt Poramboke land and the Transformer was erected on the sidelines leading to the street. Hence the TANGEDCO officials stated that they were justified in erecting the pole.

On hearing the arguments from both parties, the Electricity Ombudsman referred to [Section 164 of the Electricity Act, 2003](#) which confers the Exercise of power of the Telegraph Authority in certain cases. Based on that the Government of Tamil Nadu granted the power to TANGEDCO for shifting or deviating electrical poles and electrical path via [G.O \(Ms\) No. 16 Energy \(C.3\) Department, dated 23.02.2012](#). Further, the Ombudsman referred to various sections in the [Indian Telegraph Act, 1885](#). (i) Section 10 of the Indian Telegraph Act Power for telegraph authority to place and maintain telegraph lines and posts which states that the authority has the right to erect the electric pole or electrical path on any land. However, if the land belongs to an individual, then the authority needs to compensate the landowner and this was informed in Section 10(4) of the Act. (ii) According to Section 16 Exercise of powers conferred by Section 10, and disputes as to compensation, in case of property other than that of a local authority if the problem persists with compensation or getting opposition on erecting the electric pole or lines, the District Magistrate has the power to solve the issue. (iii) Even after erecting the electric pole and the electrical lines, if the landowner wants to remove or shift or deviate the path, then the landowner needs to file a petition with the District Magistrate and he/she has the power to order compensation to the landowner, whatever demands put forth by the landowner (if the demands are fair).

Source - [Ombudsman case, TNERC](#)

ECC VOICE

சேலம் மாவட்டம், நரசிங்கபுரம் பகுதியில் வசிக்கும் திரு. கிரிதரன் என்பவர், தனது வீட்டின் மின்கட்டணம் கடந்த பில்லிங் சுழற்சியை விட அதிகமாக இருந்ததால், மின் மீட்டர் பொருத்தி பல ஆண்டு காலம் ஆனதால், பழுதாகி இருக்கலாம் என்று எண்ணி, அவற்றை பரிசோதித்து மாற்றி புதிய மின் மீட்டர் பொருத்துமாறு அவர்களது பகுதி லைன் மேனிடம் புகார் அளித்துள்ளார். ஆனால், அவரின் புகாருக்கு எந்தவித நடவடிக்கையும் மேற்கொள்ளப்படவில்லை. சேலம் மின் நுகர்வோர் மையத்தின் செயல்பாடுகளைப்பற்றி திரு. கிரிதரன் அறிந்தமையால் முதுநிலை ஆலோசகர் திரு. பூபதியை தொலைபேசி மூலம் தொடர்பு கொண்டு தனது பிரச்சனையை கூறி புகாராக அளித்தார். திரு. பூபதி அவர்கள் மின் ஆலோசகர் திரு. ஜெயராமன் அவர்களுடன் ஆலோசித்து அப்பகுதியின் மின்வாரிய உதவி செயற்பொறியாளரை சந்தித்து, இப்புகாரினை விவரித்தார். மேலும் விரைவில் பரிசோதித்து, உரிய நடவடிக்கை எடுக்குமாறு வேண்டுகோள் விடுத்தார். அதன்பிறகு சம்மந்தப்பட்ட அதிகாரிகள், வீட்டின் மின் மீட்டரை பரிசோதித்து பழுதாகி இருப்பதை கண்டறிந்து புதிய மின் மீட்டரை பொருத்திக் கொடுத்தனர். குறுகிய காலத்தில் தக்க நடவடிக்கை எடுத்து உதவிய சேலம் மின் நுகர்வோர் மையத்திற்கும், முதுநிலை ஆலோசகர் திரு. பூபதி மற்றும் மின் ஆலோசகர் திரு.ஜெயராமன் அவர்களுக்கும் திரு. கிரிதரன் தனது நன்றியினை தெரிவித்தனர்.

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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

Non-fossil fuels forecast to be 50% of China's power capacity in 2022

Non-fossil fuel energy sources such as wind, nuclear, solar and hydropower may make up half of China's total power generation capacity by the end of 2022, for the first time ever, the country's electricity council has forecast.

China, the world's biggest greenhouse gases emitter and coal consumer, is expected to add 180 gigawatts (GW) of new power generation capacity from non-fossil fuel sources during 2022, driving total non-fossil fuel capacity to 1,300 GW, according to a report issued by the China Electricity Council (CEC) late on Thursday.

That equates to half of the CEC's forecast of total installed power generation capacity in China of 2,600 GW by the end of 2022, of which 1,140 GW would be coal-fired power capacity, the report said. China has pledged to "control" coal consumption in the 2021-2025 period and bring total wind and solar capacity to at least 1,200 GW by the end of this decade in order to cap carbon emissions by around 2030 and reach a carbon neutrality by 2060.

The CEC earlier this month said that China's power industry, which causes about 41% of the country's total carbon emissions, could aim to cap its carbon emissions by 2028. In Thursday's report, the council also forecasted China's electricity consumption in 2022 will increase by 5%-6% from a year earlier, reaching 8.7 trillion to 8.8 trillion kilowatt-hours.

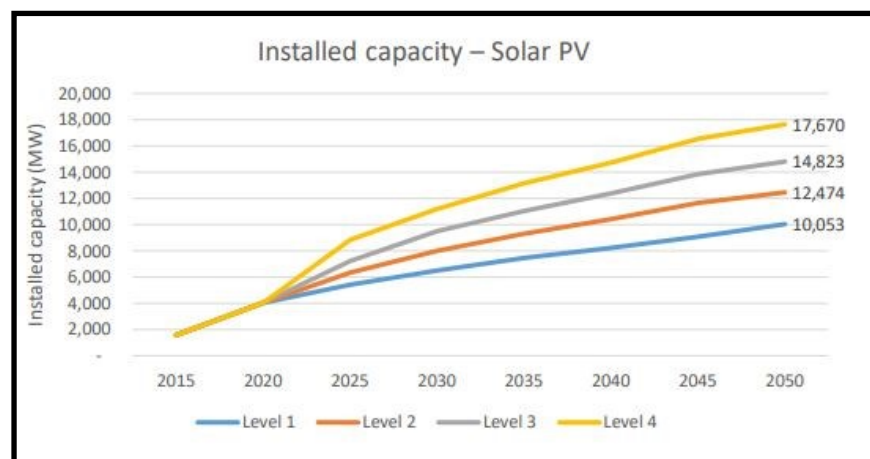
"(We) expect the electricity supply and demand situation in 2022 to be generally balanced across the country. But some regions could see power crunch during peak demand hours in summer and winter season," the CEC said. More than half of Chinese regions suffered from a months-long power shortage in 2021, partly because of low hydropower generation and insufficient coal supply.

Source: [Reuters](#), January, 28, 2022

Publications / Regulations

- Electricity Market Report, January 2022, [IEA](#)
- Geopolitics of the Energy Transformation: The Hydrogen Factor, [IRENA](#)
- Charging Infrastructure for Electric Vehicles (EV) - the revised consolidated Guidelines & Standards, [Power Ministry](#)

Tamil Nadu State Energy Calculator 2050



Source: [TANGEDCO](#)