

Energy Access and Gender roles (Part-3)

The previous [issue](#) explored how energy access for cooking is connected to domestic productivity for women. This issue will focus on energy access and cooking in rural India.

Rural India & cooking: Women in rural India spend most of their human energy to obtain just a [little heat energy](#) to cook a basic meal. [Studies](#) suggest that they predominantly bear a disproportionate burden in collecting and preparing biomass for cooking. Rural households in India have mainly depended on kerosene and biomass for cooking, lighting and other needs. These fuels contribute to [air pollution and cause health hazards](#). Replacement of such polluting sources with electricity will reduce household [air pollution and respiratory diseases](#), especially in women and children along with reductions in [neonatal death and low birth weight](#).

In the case of households in urban slums, both men and women are equally involved in collecting firewood. Still, it is the female members who undertake dung cake preparation. In addition to engaging in fuel collection and preparation, women are responsible for cooking in households using solid fuels.



Source: Canva

Energy access & cooking: The fuel - i.e. source of energy used for cooking can largely impact the amount of time spent in cooking, domestic productivity and wellbeing of a household, especially for women. [The World Bank report](#) on energy access and gender states that progress towards achieving universal access to clean and affordable energy via modern energy services is inequitable. Women carry the burdens of the gap in energy access. Globally, more than [4 million deaths](#) occur every year, mostly among women and children, due to fumes from fuels such as wood, animal waste, and charcoal used for cooking and heating.

The subsequent issues will focus more on energy access and cooking in India from a gender perspective and highlight the solutions that can bridge the gaps

(To be continued)

INSIDE THIS ISSUE:

<i>Editorial</i>	1,2
<i>Tamil Nadu News</i>	3
<i>India News</i>	3
<i>Consumer Focus</i>	4
<i>ECC Voice</i>	4
<i>World News</i>	5
<i>Publications, Statistics</i>	5

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All you need to know about electricity safety regulations (Part-3)

The [previous issue](#) highlighted key aspects of the central electrical safety regulations. This editorial will focus on a case study which will outline safety measures for home builders to take, especially if the home(s) is being built near high tension wire lines.

Case brief:

A consumer had purchased a plot in which he intended to build a new home for his family. There was a 11kv high tension (HT) overhead line adjacent to his plot. On a temporary basis, the consumer had built a wooden grill with a height clearance of about only 1 foot to the 11kv HT line for the course of the construction work. In an unfortunate accident, a construction worker who came in contact with the 11kv line got electrocuted and passed away in a matter of 2 hours, despite being rushed to the nearest hospital.



Source: Canva

What caused the accident?

The clearance between the wooden grill and the 11kv line was too low and did not meet the standards prescribed in the central electrical safety regulations. Although the consumer was aware of the live line passing nearby, he had proceeded with the construction work without taking any precautionary measures.

What does the rule say?

CEA (Measures relating to safety and electric supply) Regulation 58, Clearance above ground of the lowest conductor of overhead lines says an overhead line including service lines, erected elsewhere than along or across any street shall be at a height not less than 4.6 meters for lines of voltage up to and including 11000 volts (11kv).



Source: Canva

Key takeaways:

- Consumers should enclose the planning permission / building plan approval along with the application for new service connection
- TANGEDCO should strictly enforce the CEA electric safety regulations and ensure that precautionary measures are taken; failing this, 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

Battery swapping policy charges up TN electric vehicle brigade

Budget 2022 has brought cheers for Tamil Nadu's electric vehicle industry which, with Rs 15,000 crore investment, is the largest EV cluster in India. With the finance minister announcing a battery swapping policy for setting up charging infrastructure and interoperability standards, TN's EV hub in Hosur should attract incremental investments, say industry experts. SUN Mobility chairman Chetan Maini said the battery swapping policy will accelerate penetration of EVs. "There are some 50 companies working in the battery swapping space-OEM, battery companies, swapping operators, OMC, energy companies, mobility solution companies and tech companies-and the new policy framework will accelerate investments in hubs like Tamil Nadu," he said.

Others like Simple Energy, which is setting up a Rs 2,500 crore plant in Hosur, are cheering, though with caution. Simple Energy CEO Suhas Rajkumar said: "Impetus should be on developing safer battery packs as swapping stations cannot be applied to direct consumers given the safety aspects. This will lead to making the vehicle ownership feel different. " EV charging company Magenta, which is investing Rs250 crore in its TN unit, finds the "intent to focus on new technologies" an investment positive. Said Maxson Lewis, MD & CEO, Magenta: "Interoperability standards to improve efficiency of EV business will support the growth of infrastructure. Encouraging the private sector to develop sustainable and innovative business models for battery and energy as a service is a boost to the EV charging ecosystem. What's missed is an explicit statement of the extension of the FAME scheme and how it can support the expansion of the charging network in India. " That's a concern echoed by Maini, who wants the government to address how customers would access subsidies (now available for EVs), range per charge criteria (as swap batteries, by definition, are smaller and have less range) and GST for swapping services in line with EVs.

Source: [TOI](#), February 02, 2022

India News

Bihar's first floating solar power plant

With a high population density and low land availability, Bihar is now using its water bodies to generate clean energy. The Bihar Government has commissioned a 2 megawatt (MW) floating solar power unit in Darbhanga district to Avaada Energy over a six acre water body and the project is about to be commissioned. The project is a great amalgamation of green energy generation and livelihood opportunities for the local communities. The solar power generation on the top will enhance the pisciculture (fish farming) below the solar panels. Chief Minister Nitish Kumar is bullish on utilising the water bodies of the state for sustainable development.

Avaada Energy says that in the 25 years life cycle of the floating solar project, some 2.7 million units of power will be generated each year and this is enough to reduce more than 64,000 tonnes of carbon dioxide (CO₂). Floating solar power projects have an inherent benefit that increases the efficiency and life of the project. The water cools the above mounted solar panels and even when the surrounding temperatures rise, they are able to generate electricity efficiently.

Solar power generated from the Darbhanga project will be transmitted to Bihar Renewable Energy Development Agency (BREDA) by Avaada Energy. The company has signed a power purchase agreement (PPA) with BREDA for 25 years. BREDA is a government agency mandated to expand clean and renewable energy in the north Indian state. The power generated in the floating solar plant will be distributed to the local consumers. This will be done by North Bihar Power Distribution Company Ltd. The project will supply power to about 10,000 people. Bihar also has a second floating solar plant which is under construction. It lies in the Supaul district which is known for water bodies that lie in the Kosi belt. It has been learnt that the Supaul project will be completed by the end of March.

Source: [Saurenergy](#), February 25, 2022

Consumer Focus

In his premises, the petitioner has three domestic service connections (415, 881 & 882) and a grid-connected rooftop solar on one of his service connections (415). On 01.11.2016, the petitioner made a request to the Assistant Engineer (AE) for shifting the solar service connection from 415 to another service connection (881). However, he did not get any response from the official. Later, the petitioner made a request to the Executive Engineer (EE) on 27.07.2018 for adding 1 kW grid-connected solar for each of his service connections (881 & 882). This request was denied by the EE through a letter dated 08.10.2018 stating that this provision was not available with TANGEDCO's billing software. Considering this, on 18.09.2020, the petitioner filed a complaint with [Consumer Grievance Redressal Forum \(CGRF\)](#) to permit him to shift the solar service connection from 415 to another service connection (881). The petitioner neither received an acknowledgement nor a hearing date from CGRF. On 22.12.2020 he received a letter stating that his request was not under the feasibility of compliance. Dissatisfied with the CGRF's response, the petitioner appealed to the [Electricity Ombudsman](#) on 25.01.2021 for shifting the grid-connected rooftop service connection (415) to another service connection.

During the hearing, the petitioner quoted a Memo from TANGEDCO dated 17.02.2014 ([Memo.No. CE/Comml/EE/R&C/AEE1/F.Solar NM/D. 023/14, dt.17.02.2014](#)), which stated that a consumer is permitted to connect the grid-connected rooftop solar up to the building's sanctioned load capacity. Citing this, the petitioner stated that his service connection (881) has a sanctioned load of 6 kW. He further made a request to add 1 kW to this after shifting from the 415 service connection. The petitioner highlighted the [Order M.P. 32 of 2020](#) which permits the addition of solar panels up to the sanctioned load of the service connection. He also referred to *Clause 11 (Consumer as prosumer)* of the [Electricity \(Rights of Consumers\) Rules, 2020](#), which states a prosumer shall be treated as a consumer. Hence the petitioner insisted on shifting the grid-connected solar service connection from 415 to 881 by permitting an additional 1 kW solar panel. On the other hand, the Superintending Engineer (SE) stated that shifting of load and additional load to the existing solar service connection was not feasible under the utility's rules and regulations. Also, there was no application process for collecting or realising this in the LT billing software. The official informed that he had sent a letter to the TANGEDCO Head Office on 06.01.2021 to get clarity on this. The official regretted not being able to acknowledge the consumer emails due to the non-availability of CGRF Members and the restrictions of the COVID-19 pandemic, among others. The official, therefore, requested to dismiss the petition.

On hearing the arguments from both the parties, the Ombudsman referred the Clause 8 (Terms of the agreement) in the Net metering Agreement - form 2 from the [Order on LT Connectivity and Net-metering, in regard to Tamil Nadu Solar Energy Policy 2012](#) which states that a consumer can terminate the agreement with 90 days prior notice to TANGEDCO and to disconnect the system from the TANGEDCO Grid. Considering this, the Ombudsman ordered that if the petitioner wants to shift the solar service connection, he needs to terminate the agreement and apply for the required service connection (881). The Ombudsman stated that there is no hindrance to add additional solar panels to existing service connections (if the capacity is under sanctioned load) based on the Order M.P. 32 of 2020. Hence the petitioner can submit an application for an additional load enhancement against the service connection 881 after terminating the previous agreement. Further, the Ombudsman informed that the petitioner's prayer on adding 1 kW of solar panel to each of the service connections (881 & 822) is not considered since this was not filed in the CGRF case even though it was mentioned to the EE. The Ombudsman expressed its disappointment against CGRF for delaying this issue. Thus the Ombudsman ordered the official to provide an addition of 1 kW solar panel against the service connection 881 within 30 days from the date of receipt of the Solar PV load enhancement application from the petitioner and dismissed the case.

Source - [Ombudsman case, TNERC](#)

ECC VOICE

திருநெல்வேலி மாவட்டம், பொட்டல் கிராமத்தில், திருவண்ணாநாதபுரத்தில் பகுதியில் வசிக்கும் திருமதி. செல்லம்மாள் அவர்கள், தங்கள் தெருவில் உள்ள மின்கம்பம் ஒன்று உடைந்து மிகவும் பழுதடைந்த நிலையில் இருப்பதால், அதனை மாற்றி தரும்படி லைன் மேனிடம் (Line man) பல முறை வேண்டுகோள் விடுத்துள்ளார். ஆனால் அவருக்கு சரியான பதில் கிடைக்கவில்லை. அப்பொழுது, திருநெல்வேலி மின் நுகர்வோர் மையத்தின், செய்தித்தாளில் உள்ள விழிப்புணர்வு படிவத்தை பார்த்து, அதன் மின் ஆலோசகர் திரு. சண்முகம் அவர்களை தொலைபேசி மூலம் தொடர்பு கொண்டு தங்களது பிரச்சனைகளை கூறி புகாராக அளித்தார்.

மின் ஆலோசகர் திரு. சண்முகம், அப்பகுதி மின்வாரியத்தின் உதவி செயற்பொறியாளர் மற்றும் உதவி பொறியாளரை தொலைபேசி மூலம் தொடர்பு கொண்டு, இப்புகாரினை விவரித்தார். பிறகு சம்மந்தப்பட்ட அதிகாரிகள் மின்கம்பங்களை பார்வையிட்டு மாற்றி தருவதாவும் அப்பகுதி மக்களிடம் உறுதி அளித்தனர். மேலும், 7 நாட்களில் புதிய மின்கம்பங்களை மாற்றி அமைத்தனர். நீண்ட காலமாக தொடர்ந்து வந்த பிரச்சனைக்கு தக்க நடவடிக்கை எடுத்து உதவிய திருநெல்வேலி மின் நுகர்வோர் மையத்திற்கும், மின் ஆலோசகர் திரு. சண்முகம் அவர்களுக்கும் திருமதி. செல்லம்மாள் மற்றும் அப்பகுதி பொதுமக்கள் தங்கள் 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**Germany Brings Forward Goal of 100% Renewable Power to 2035**

Germany plans to rapidly accelerate the expansion of wind and solar power, bringing forward a target to generate almost all the country's electricity from renewable sources by 15 years to 2035. The Economy Ministry, which also oversees energy and climate policy, proposed new legislation on Monday that aims to roughly triple the annual additions from onshore wind and solar facilities. Offshore wind capacity is set to more than double.

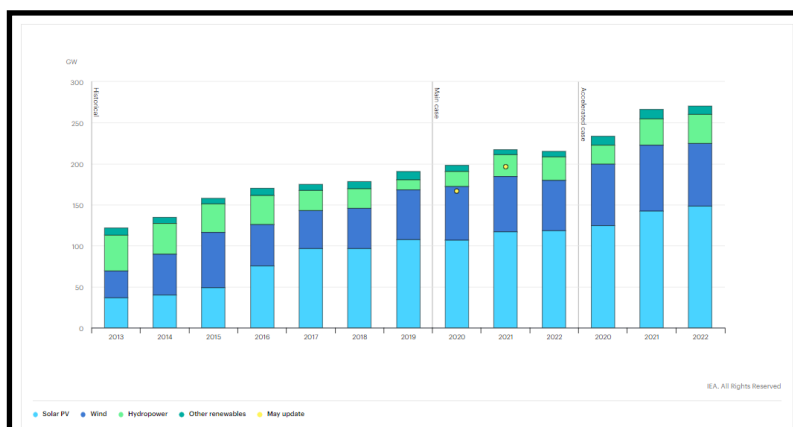
Germany is launching a series of measures to diversify its energy sources away from Russia after Moscow's invasion of Ukraine. Germany relies on Russia for more than half its natural gas, and a decision to phase out nuclear power -- the last three reactors are set to go offline this year -- has left Europe's largest economy vulnerable to disruption. To avoid a short-term energy crunch in the future, the ministry also proposed measures that would force operators to maintain minimum levels in gas storage facilities. The ministry called out Russia's Gazprom PJSC as having especially low reserves in Germany this winter, when households were hit by soaring heating costs. More than 30% of Germany's gas reservoirs are controlled by the Russian gas giant.

To bridge the gap until there's sufficient renewable power capacity, Germany is also getting ready to prolong the use of coal beyond 2030. To create alternatives to Russian gas, Germany is seeking to revive plans to build liquefied natural gas terminals. This is especially necessary against the background of Russia's delivery behavior, which has not been reliable," the government said in the document. The Russian war of aggression in Ukraine has increased the urgency. The laws are still drafts, and details could change before they go into force.

Source: [Bloomberg](#), February, 28, 2022

Publications / Regulations

- Smart Electrification with Renewables: Driving the Transformation of Energy Services, [IRENA](#)
- Amendment on Installation and Operation of Meters, CEA Regulations, 2022, [CEA](#)
- Green Hydrogen Policy, [MNRE](#)

Renewable electricity net capacity additions by technology, main and accelerated cases, 2013-2022

Source: [IEA](#)