Volume VII, Issue 3

Current News
மின் செய்திகள்

March, 2022

Energy Access and Gender roles (Part-4)

The previous issue explored how energy access for cooking is connected to domestic productivity for women with focus on rural India. This issue will focus on how energy can advance economic development for women.

How can women play their role in the energy sector? The economic development of women is a key ingredient to overall development. Women are not equitably involved in energy projects compared to men. Investment in energy sector projects can contribute to direct economic benefits to women. Such investments can also have indirect effects on health, education and nutrition.

A study on two Indian programs, *lighting a billion lives* (featuring solar lanterns; solar microgrids; cookstoves and solar home lighting systems) and *Hariyali Green Energy* (focused on solar lanterns and energy-efficient stoves) found that women's access to solar lanterns led to income generation opportunities for them in areas such as childcare, midwifery, food preparation for catering, tutoring and home-based work.

Small scale energy technologies such as solar cookers can improve the health and quality of life of women and other members of the households through improved air quality and reduced respiratory illness. Women may enjoy reduced time in cooking and fuelwood collection. For example, in Nepal, micro-hydro plants are powering grain mills. This has considerably reduced women's workload of grain processing. Another example is solar water pumping in Zimbabwe's Rural Sustainable Energy Project (RuSED) which has reduced the time spent on water collection by as much as 6 hours.

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.

Women can improve energy supply chains. Supporting participation by women in energy supply chains, encourages gender equality in employment and improves the effectiveness of the supply chain. The World Bank's report states that female employment in electricity, gas and steam, and water sectors are half the level of male employment, albeit women (who are part of social networks which differ from those of men) have access to difficult to reach households that might want to buy energy devices.

(To be continued)

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All you need to know about electricity safety regulations (Part-4)

The previous issue explained a case study which outlined safety measures for home builders. This editorial will discuss the general safety conditions relating to supply and use of electricity for the consumers.

Case brief:

A domestic consumer's service connection wire is tied from an electric pole to a Galvanised Iron (GI) pipe which is fixed on the side wall of his house. In an act that jeopardises her household's electrical safety, the consumer ties a steel wire to the GI pipe in order to air dry her wet clothes.

- On a particularly cold and rainy day, the service connection pipe breaks causing an excess discharge of electricity from the service pipe to the GI pipe.

(Source: Canva) - Photograph of a woman air drying clothes in a terrace away from electrical wires/poles

- The excess discharge then passes from the GI pipe to the steel wire on which the consumer hangs wet clothes.
- Subsequently, the consumer touches the GI pipe while removing the wet clothes and loses her life in a fatal electrocution.

What caused the accident?

The consumer had tied a clothes line made of steel wire and the service connection wire to the same GI pipe. When the service connection pipe broke on that rainy day, there was a rapid increase in discharge of electricity from the pipe to the wet wires. Since water is a conductor of electricity, the presence of moisture rapidly increases discharge of electricity to the GI pipe and steel wire, thus posing an impending risk to anyone who makes contact with either the steel wire or the GI pipe.

(Credits: Twitter/ Monica Verma) - Photograph of a man air drying clothes on the electrical wires.

What does the rule say?

CEA (Measures relating to safety and electric supply) Regulation 42, earth leakage protective device says the supply of electricity to every electrical installation shall be controlled by an earth leakage protective device, so as to disconnect the supply instantly on the occurrence of earth fault or leakage of current.

Earth Leakage protective Device:

An Earth-Leakage Circuit Breaker (ELCB) is a safety device used in electrical installations (both residential and commercial) with high earth resistance to prevent shock. It detects small stray voltages on the metal enclosures of electrical equipment and interrupts the circuit if the voltage level exceeds the danger threshold. The main purpose of ELCB is to detect Earth leakages and prevent injury to human beings from electrical shocks and prevent electrical fires that are caused by short circuits.

(Source: Canva)

Key takeaways:

- Consumers should not connect anything with the service connection pipe directly or indirectly.
- While constructing a house, ensure that the earthing is properly grounded; which is essential for avoiding the earth fault.
- Consumers should install the earth leakage protective device to avoid the leakage of current; failing this, there will be damages to the appliances and in some cases there is the possibility of death by electrocution.
- Public should not tie wet/drying wires with any Electrical equipment / supports.

(To be Continued)

Tamil Nadu News

Net Feed-in Methodology Approved for Solar Projects of 1 MW and Above in Tamil Nadu

The Tamil Nadu Electricity Regulatory Commission (TNERC) recently ruled that a solar developer was entitled to grid connectivity for loads of 1 MW and above up to the contracted demand by installing a reverse power relay. The ruling came in as a response to the Tamil Nadu Generation and Distribution Corporation Limited's (TANGEDCO) petition seeking amendments to the 'Grid Interactive Solar Energy Generating System Regulations, 2021.'It requested the Commission extend the net feed-in methodology to all high tension (HT) consumers to establish rooftop or ground-mounted solar projects in their premises for all loads of 1 MW and above and duly collect the networking charges.

TANGEDCO had previously filed the petition seeking a gross metering methodology to all HT consumers to establish rooftop or ground-mounted solar projects in their premises irrespective of voltage level for loads above 10 KW as recommended in the Electricity (Right of consumer) Rules, 2020. The Commission, in response, had issued the generic tariff order for grid-interactive solar energy generating systems for gross metering for rooftop solar projects in premises with capacities up to 999 kW on October 22, 2021. The regulations will apply to consumers and generators having sanctioned load or contracted demand of less than 1 MW. However, there was no clarity for loads of 1 MW and above in the regulations. TANGEDCO added that it had received 37 applications for approval to connect solar power generating systems with more than 1 MW within their sanctioned load or contracted demand. Hence, clarity was required for such cases as well.

The state regulator added that the prosumer should bear the cost and install a solar generation meter. The interface meters should be 'Available-Based Tariff' (ABT) compliant and as per the CEA (Installation and Operation of Meters) Regulations, 2006. Last December, TNERC revised the rules for verifying captive open access projects. TANGEDCO will verify data and assign captive status to the projects in the state based on data furnished by the captive power developers.

Source: Mercom, March 03, 2022

India News

India targets 85% of energy needs from green sources

A 25-year vision document has proposed replacing coal-based power generation capacity by stepping up the installed renewable energy generation base to 85% of the total requirement at an investment of '60 lakh crore, said officials with knowledge of the matter. Based on this, coal's contribution will drop to a 10th by 2047 from more than half now, backing up the Prime Minister's carbon-reduction pledge. The estimated investment requirement is for 1,125 GW of renewable energy capacity and domestic manufacturing of 50 GW of renewable energy equipment by 2047, raising the prospect of a big boost for such utilities.

According to the proposal prepared by the renewable energy ministry, coal-fired capacity will initially rise to 267 GW by 2030 from the present 210 GW and, subsequently, decline to 140 GW by the 100th year of India's independence. Coal-fired power stations with a capacity of 40 GW are currently being built. The vision document implies India will freeze its coal-based power generation capacity and phase out such plants as they age. Renewable energy secretary Indu Shekhar Chaturvedi will hold a virtual stakeholder consultation with the industry on Thursday on the proposal. The ministry has identified the key goals for the country in 2047 as energy independence and security, enhancing decarbonisation of the energy sector, self-sufficiency in equipment manufacturing and becoming a global hub for green hydrogen. Experts said the proposal is key to India's energy security given the lessons learnt from the impact of Covid and, more recently, the Russian invasion of Ukraine. In his Independence Day speech, Modi had said India spends over ₹12 lakh crore on energy imports every year and, to progress, energy independence was the need of the hour.

Source: economictimes, March 10, 2022

Consumer Focus

The petitioner is a commercial consumer who had to use a defective meter with a display failure between November 2019 and January 2020. He had filed a formal complaint to change the defective meter to the Assistant Engineer (AE) in the concerned section office on 04.11.2019. After multiple follow-ups, officials replaced the meter by 23.01.2020. During the interim period, the petitioner was charged a high electricity bill amount. Furthermore, the petitioner received a shortfall amount of Rs. 1,78,658 from the audit team for the defective period through a letter dated 24.02.2020. Since the petitioner was not aware of the shortfall amount calculation, he tried to meet the officials for clarifying the shortfall amount calculation. Due to the pandemic lockdown, he could not meet the officials. Hence the petitioner paid the full amount on 18.03.2021, to ensure that their commercial unit functions.

The TANGEDCO Assistant Engineer submitted a dropping proposal for the shortfall amount, based on the representation from the Petitioner, to the audit branch on 31.05.2021. The proposal clearly mentioned that the average shortfall amount calculated was made without following the provisions in TNERC Supply Code Regulations. The audit branch rejected the dropping proposal in a letter dated 26.07.2021, stating that the petitioner has already paid the amount and the dropping proposal could not be accepted. After this, the petitioner sent a reply notice to the Assistant Engineer regarding the wrongly calculated shortfall amount on 09.08.2021. Since there was no positive response from the officials, the petitioner registered a complaint with the Consumer Grievance Redressal Forum (CGRF) on 01.09.2021. In his complaint he requested that the shortfall amount should be recalculated and the excess amount paid by him should be adjusted in the future bills. Subsequently, on 16.09.2021 CGRF ordered TANGEDCO's Assistant Engineer to send a detailed report on the action taken. It was highlighted that the report should be submitted to the forum within 15 days from the receipt of the order. Based on the order, the Assistant Engineer re-submitted the dropping proposal to the audit branch on 03.12.2021. However, the proposal was rejected without a valid reason for the rejection. Aggrieved by the order, the petitioner appealed to the Electricity Ombudsman.

During the hearing, the same set of arguments were put forth. Based on the arguments, the Ombudsman found and highlighted that the period of meter failure can be determined based on consumer ledger data as the CMRI data was not available. For the 09/2019 billing cycle, the current consumption was recorded as 6668.29 kWh on 26.09.2019 and meter display was accurate. On the next billing cycle 10/2019, the display failure was noted and the reading was also at 6668.29 kWh. Hence the meter was found to be defective from 27.09.2019 to 23.01.2020. As per Tamil Nadu Electricity Supply Code, 11(2)- *Assessment of billing in cases where there is no meter or meter is defective, the officials should calculate the average units preceding the month during which the meter failed.* In this case if accurately calculated, the average units would come up to 12,387.2. (for the months of 09/2019, 08/2019, 07/2019 & 06/2019). Instead the shortfall amount was calculated based on consumption during 02/2019, 03/2019, 04/2019 & 05/2019 which gives a much higher average of 18,133 units. TANGEDCO officials failed to justify the method adopted by them to calculate the average shortfall amount. Hence the Ombudsman ordered the officials to calculate the average shortfall amount for the defective period in accordance with the *Tamil Nadu Electricity Supply Code, 11(2)* ie., 27.09.2019 to 23.01.2020 and to adjust the excess amount if any paid by the petitioner against the future bills as per the Regulation 12(2) *Errors in billing of the Tamil Nadu Electricity Supply Code* and to submit a compliance report within 30 days from the date of receiving the order.

Source - **Ombudsman Case, TNERC**

ECC VOICE

கடலூர் மாவட்டம், திட்டக்குடி வட்டத்தில் வசிக்கும் திரு. செல்வராஜ் என்பவர், தொழுதூர் பகுதியில் தனது வீட்டிற்கு புதிய மின் இணைப்பு வேண்டி இணையதளத்தில் விண்ணப்பம் செய்துள்ளார். ஆனால், ஒரு மாத காலம் ஆகியும், அவரது விண்ணப்பம் மீது எந்தவித நடவடிக்கையும் மேற்கொள்ளப்படவில்லை. மார்ச் மாதம் செய்தித்தாளில் வந்த கடலூர் மின் நுகர்வோர் மையத்தின் விழிப்புணர்வு படிவத்தை பார்த்து, அதன் மின் ஆலோசகர் திரு. கோவிந்தராஜீலு அவர்களை தொலைபேசி மூலம் தொடர்பு கொண்டு அவரது பிரச்சனையைக் கூறி புகாராக அளித்தார்.புகாரினை பெற்றுக்கொண்ட மின் ஆலோசகர், உதவி பொறியாளரை தொலைபேசி மூலம் தொடர்பு கொண்டு புகாரினை விவரித்தார். அப்பொழுது, உதவி பொறியாளர், நுகர்வோரின் வீட்டிற்கு அருகில் ஒரு மின்கம்பம் அமைத்து, தாழ்வழுத்த (Low tension) மின்பாதை இடமாற்றம் செய்து மின் இணைப்பை வழங்க வேண்டியுள்ளதால் கால தாமதம் ஏற்படுவதாக தெரிவித்தார். மேலும், இவற்றை அமைப்பதற்கான தளவாட பொருட்கள் அவர்களது பண்டசாலையில் இல்லாததால், அவற்றை கொள்முதல் செய்யும் பணிகள் நடைபெற்று வருவதாக தெரிவித்தார். பின்னர் மின் ஆலோசகர், உதவி பொறியாளரிடம் விரைவில் நடவடிக்கையினை எடுக்குமாறு கேட்டுக் கொண்டார். பிறகு மின்வாரிய அலுவலர்கள், மின் இணைப்புக்கு தேவையான பணிகளை நிறைவு செய்து, 21.03.22 அன்று புதிய மின் இணைப்பினை வழங்கினர். நீண்ட காலமாக தொடர்ந்து வந்த பிரச்சனைக்கு தக்க நடவடிக்கை எடுத்து உதவிய கடலூர் மின் நுகர்வோர் மையத்திற்கும், மின் ஆலோசகர் திரு. கோவிந்தராஜீலு அவர்களுக்கும் திரு. செல்வராஜ் தனது 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.

World News

Current News

Demand for PV storage systems in Germany rises amid energy crisis

The popularity of home solar storage systems is growing in Germany, driven by high electricity prices and the current energy crisis, with the number of new installations surging about 60% in 2021.

Around 141,000 new solar storage systems were set up at German homes last year, bringing the total number of such installations in operation to more than 400,000, the German solar energy association BSW said on Wednesday. The demand is expected to grow further as a response to the war between Russia and Ukraine.

The purchase of a solar installation and a storage system is considered a statement of energy independence by an increasing number of households, said BSW's managing director Carsten Koernig. Electric cars are also making more people switch to solar power and storage technology, according to him.

The association again called on the German government to take steps to significantly improve the framework conditions for decentralised electricity supply. Such measures should include reducing bureaucracy and adjusting the funding scheme.

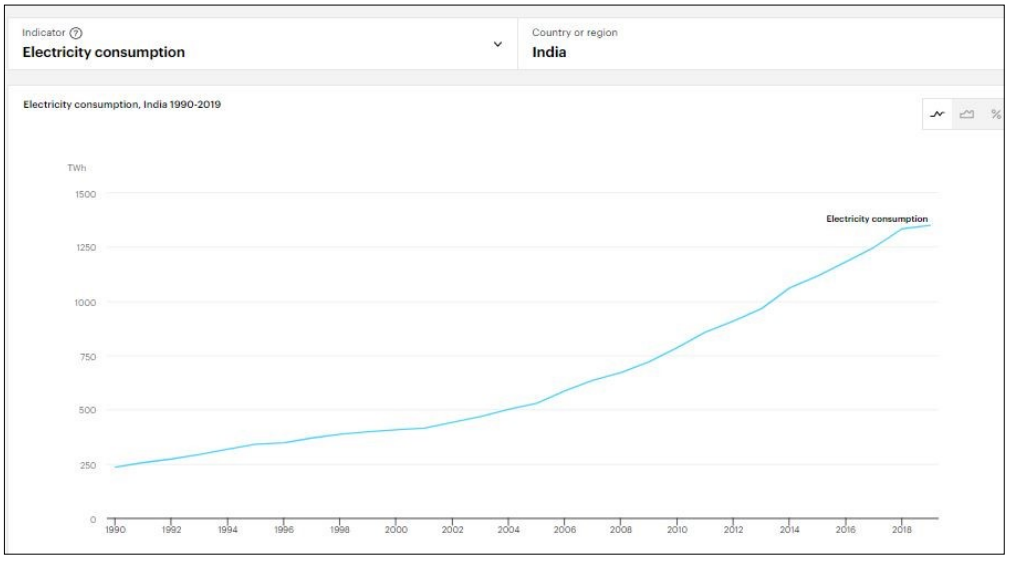
A drastic and rapid increase in the existing storage capacity is seen as crucial for the success of the energy transition as this would help offset fluctuations in the power generation from renewable sources and ensure grid stability, according to BSW.

Source: Renewablesnow,March 10,2022

Publications / Regulations

- World Energy Transitions Outlook: 1.5°C Pathway, March 2022, IRENA
- MNRE Annual Report, MNRE
- World Energy Transitions Outlook: 1.5°C Pathway, IRENA
- Green Hydrogen for Industry: A Guide to Policy Making, IRENA

Electricity consumption, India 1990-2019



Source: IEA