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Current News
மின் செய்திகள்

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Energy Conservation Act (Part-1)

Energy conservation refers to any steps taken for reducing wasteful consumption of electricity. This could include individual steps such as using devices for shorter time periods, switching off lights and fans when not in use, or larger collective steps such as designing buildings to conserve energy.

Energy efficiency is another vital term which refers to using technology that requires less energy to perform the same function. This could include simple steps such as switching to LED bulbs and using energy-efficient devices. Energy conservation is vital to protecting the environment as it minimises the use of fossil fuels, which are still the primary raw material used to meet the demand for electricity. The Executive Director of IEA in a press release stated that energy efficiency is considered the 'first fuel' as it is the cleanest and, in most cases, the cheapest way to meet our energy needs. This makes it a vital focus area for reducing our emissions and meeting our emission targets. Energy efficiency ensures that the rising overall demand is also reduced, and any excess energy is available to be used for other purposes.

The origins of energy efficiency in India can be traced back to 1970 when the Fuel Policy Committee (FPC) was constituted to devise a national fuel policy. The FPC introduced the concept of efficient use of fuel. The Government of India passed the Energy Conservation Act, 2001 (from here on called the Act) to implement policies/programmes for energy conservation and efficiency in the nation. There is now an Energy Conservation Amendment Bill, 2022 passed by the Lok Sabha and which is currently before the Rajya Sabha.

The aim of the Act is two-fold: to provide for efficient use of energy and energy conservation. In order to commence the energy efficiency drive in the country (at the Central and State level) the Act provides for (a) regulatory mechanism (Standards & Labelling, Building Codes) (b) institutional arrangement (constitution of BEE) (c) legal framework (mechanism for policies and programmes).

Some of the regulatory mandates passed through this Act to ensure energy efficiency and conservation are:

1.Standards & labelling of equipment and appliances

Provisions: Section 14(a) to (c) empowers the Central Government to notify norms for processes and energy consumption standards for the equipment or appliance for which these standards apply. Section 14(d) directs the display of such particulars on a label on the equipment, in the manner as may be specified by regulations.

Operational: The Ministry of Power launched this program on May 18, 2006. It lays down minimum energy performance standards and promotes the display of energy performance star labels, (scale 1-5, 5 being the most energy efficient) on high-energy end-use equipment like air conditioners and refrigerators. 29 appliances/equipment are currently covered under this programme. The website https://beestarlabel.com/ provides a tool to search and compare ratings.

(To be continued)

INSIDE THIS ISSUE:

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Residual Current Device

According to NCRB (National Crime Records Bureau) data,12,529 people lost their lives due to electrocution in 2021. This constituted 3.2% of the total accidents that year. 1808 of these fatalities were due to electrical accidents caused by short circuits. An electric accident occurs when a person comes in contact with a source of electricity. This can happen for various reasons: faulty wiring, missing earthing, improperly installed electrical equipment, negligence when handling the equipment etc. Electrical accidents can easily lead to death; or at least, severe injuries.

In a safe electricity circuit, the current must pass in a closed loop (the circuit). The loop is insulated to ensure that there is no leakage of electricity. However, due to faulty wiring or an appliance breaking down, current can pass through the insulated surfaces. This is called current leakage. If a human being comes in contact with this current, it can result in an electrical accident.

To prevent this, earth leakage protective devices are recommended. These should be installed inside premises where the combined voltage of the equipment falls between 250V to 2kW, which is mentioned in Regulation 42, Central Electricity Authority, Measures relating to Safety and Electricity Supply) Regulations, 2010}. Earth Leakage Circuit Breaker (ELCB) was the first earth leakage protective device introduced in the market. ELCBs are of two types (i) Voltage Operated ELCB and (ii) Current Operated ELCB.

A Voltage Operated ELCB contains a relay coil which is connected to the installation at one end and the ground on the other end. Therefore, if a live wire breaks or its insulation fails & comes in contact with the body of the equipment (a current leak), a voltage difference appears across the terminals of the coil. When the voltage exceeds a certain limit, it will lead to an electric shock. The ELCB detects this leak, and switches off the power. It will remain switched off until manually re-set.

Current operated ELCB, is also called a Residual Current Device (RCD) or Residual Current Circuit Breaker (RCCB). It is a new technology which is widely used as another type of earth leakage protective device. RCD/RCCB is a safety device to detect small leakage currents, disconnecting quickly enough to prevent device damage or electrocution. It continuously monitors the phase and neutral current in the circuit. If the current leaks through any path, the RCCB will automatically switch off the power.

Image : Residual Current Device
Source: C&S Electric

Importance of RCD:

1. The rapid response of an RCD is designed to protect against electrocution, serious electrical injuries and electrical fires.
2. This is different from circuit breakers and fuses which protect against overloading (voltages) and short circuits but cannot protect against electrocution. This is a special feature offered by the RCD.

Regulation 16(2a) of Tamil Nadu Distribution Code, 2004 "Safety Aspects" states that the supply of electricity to every installation of low voltage (240 V) and medium voltage (450v) including installations of temporary supply shall be controlled by a Residual Current (operated) Device (RCD), whose rated residual operating current shall not exceed 30 milliampere.

Regulation 16(1) of Tamil Nadu Distribution Code, 2004 "Safety Aspects" provides an authority to inspect all domestic and commercial electrical installations on a periodic basis.

1. In 2021, Tamil Nadu Electricity Regulatory Commission (TNERC) instructed the utility (TANGEDCO) to ensure installation of earth leakage protective devices such as residual current devices in all existing domestic and commercial properties for both single phase and three phase connections.
2. For new service connections, that consumers shall have installed an RCD and this must be declared in the application itself. No service connection shall be effected, unless an RCD is installed and safety to residents/users is ensured.

(Concluded)

Tamil Nadu News

Significance of TN's power tariff hike

Tamil Nadu Electricity Regulatory Commission (TNERC) has notified an amendment to the Tamil Nadu Electricity Supply Code to enable the transfer of electricity service connection in the name of tenant or leaseholder by producing a registered lease/rent agreement as proof of occupancy. The amendment follows a representation from consumers that Tangedco has been rejecting such name transfer requests in the absence of the specific provision. In a recent representation to TNERC, M/s. Embassy property Services pointed out that it was the lease holder and co-developer of the property near Vels University, Zamin Pallavaram, Chennai and the Land Owner was M/s. SNP Infrastructures LLP, under whose name the HT service connection was effected.

Embassy said it had proposed for wider expansion of its activities in the said premises by availing of additional load from Tangedco, and by setting up solar panels. However, for the solar panels, it could not avail the subsidies provided by the Centre and the State government since the service connection was in the name of the land owner. The land owner had given absolute consent for effecting the name transfer of HT Electricity Service Connection with the available deposits. Tangedco authorities orally observed that the application could not be considered, as there was no specific regulation for effecting the name transfer in favour of the tenant/lease holder/co-developer, Embassy noted. It also pointed out that while the regulation categorically talked about enabling the name transfer, the application forms only mentioned documents such as copies of sale deed/property tax receipt/Metrowater and sewerage connection for effecting name transfer in case of sale of property. Sources said many industrial units that have taken premises on rent or lease have faced such issues. The TNERC amendment now paves the way to enclose registered rent or lease agreement, and effect a name transfer for the service connection in the name of the tenant.

Source: The Hindu, August 31,2022

India News

India pushes for renewable energy initiative with Central Asia: invites region to join International Solar Alliance

Despite complementarities, the share of energy exports from Central Asian countries to India remains minuscule, said Bandaru Wilsonbabu, Joint Secretary, Ministry of External Affairs, at the webinar: India-Central Asia Business Council Webinar on Energy Cooperation, organised by FICCI. Wilsonbabu alluded to India's substantial progress and initiatives, notably, the installed renewable energy capacity, which stood fourth largest globally, and stated that the "share of non-fossil fuel energy has reached 40% of India's energy mix." "India stands ready to share its experience and expertise in renewable energy and welcome the Central Asian countries in the International Solar Alliance and the One Sun, One World, One Grid initiative," he added. However, he noted that "India remains dependent on fossil fuel imports" and underlined "the need for enhanced connectivity between India and Central Asia." He averred that Central Asian countries endowed with rich natural resources could enhance trade ties with India in the energy space.

"Turkmenistan is among the top-five countries of the world in proven reserves of natural gas, Tajikistan has substantial reserves of crude oil, and considerable reserves of natural gas are found in Uzbekistan. In addition, the mountainous countries of Tajikistan and the Kyrgyz Republic have a huge hydropower potential," he added. Dinesh D. Jagdale, Joint Secretary, Ministry of New and Renewable Energy, also spoke on occasion. He said, "India is implementing one of the largest and the fastest energy transition programmes by focusing on large-scale development and deployment of renewable energy." He noted that India had achieved 40 per cent of its installed capacity from non-fossil fuel-based sources nine years ahead of schedule.

Source: Economictimes, August 24, 2022

Consumer Focus

The appellant is a resident of a Tamil Nadu Housing Board (TNHB) apartment under allotment. The development has 64 flats. The electricity connection for this apartment complex was effected on 17-07-2001. Out of the total 64 flats, the appellant was the only person, on 21-09-2021, charged an amount of Rs.10,000 for erection of the electricity pole. The appellant made multiple visits to the TANGEDCO office and sent letters to repeal the charges, but the issue was not resolved. On non-payment of the charges, TANGEDCO officials arrived on 04.01.2022 to disconnect the service connection; with no recourse, he paid the amount under protest on that day. Immediately after, he approached the Consumer Grievance Redressal Forum on 16.02.2021. CGRF held that his request for a refund of the amount paid towards erection charges is not feasible due to the utility's compliance with BP No. 45 and disposed of his petition.

The appellant subsequently approached the Ombudsman on 17.03.2022. The appellant argued that he was charged under an order (BP No. 45) which was no longer valid; and that he was the only consumer charged this fine on behalf of 64 flats in the apartment.

The respondent (TANGEDCO) argued that in September 2021, the Board Office Audit Branch (BOAB) of TANGEDCO raised an audit slip for an amount of Rs.10,000/- towards erection of pole charges. This follows BP No. 45 dated 16.03.2000 which stated that flat promoters applying for the new service connection for their newly constructed flats have to pay these charges towards the cost of service connection work' and these are chargeable to consumers. The service connection, in this case, was effected on 17.07.2001 under tariff "LA1A" and it stands in the appellant's name. The respondent stated that the amount toward erection charges was therefore collected to comply with B.P. No. 45 and hence there cannot be a refund of the Rs. 10,000/- paid.

The Ombudsman observed that the Chief Engineer (CE), Commercial had issued a direction in Memo No CE/Comml./EE3/AEE3/F.ErectionCharges/D.383/10, dated 23-01-2010 to collect the erection charges as per B.P.No.45 (Technical Branch) dated 16-03-2000. The Ombudsman referred to the order of APTEL in 74 of 2007 which stated that the Discom has to raise the bill within 3 years of discovering the defect in charges, to apply Section 56(2) of the Electricity Act for recovering the dues. However, in the case of the appellant, the bill of demand for erection charges was not made to the appellant's service connection within 3 years from the CE/Commercial's direction dated 23-01-2010, but on 1.09.2021 after a lapse of 11 years.

Considering the facts of the case, arguments put forth, cases cited, and the statutes relied upon, the Ombudsman passed the following order:

- The claim of erection charges for the appellant's service connection is 'barred by limitation', ie, raised after the expiry of time within which a bill could have been legally raised.
- Hence the respondent is directed to refund the erection charges paid by the appellant under protest within 30 days from the date of receipt of this order. The refund shall be made in line with regulation 12(2) of TNE Supply Code Regulations, 2004.

Source - Ombudsman Case, TNERC

ECC VOICE

ஜூலை 2022 இல், திருச்சி மாவட்டம், பெட்டவாய்த்தலை கிராமத்தைச் சேர்ந்த திரு.கார்த்திக், கனமழை மற்றும் இடியால் தனது வீட்டின் மின் மீட்டர் சேதமடைந்ததாக பெட்டவாய்த்தலை, இளநிலைப் பொறியாளரிடம் புகார் அளித்தார். பலமுறை சந்தித்து புகாரின் நிலை குறித்து கேட்டதற்கு, இரண்டு நாட்களில் சரி செய்யப்படும் என இளநிலை பொறியாளர் பதிலளித்தார். புகார் அளித்து இரண்டு வாரங்களாகியும், பழுதடைந்த மின் மீட்டர் சரி செய்யப்படவில்லை. அப்போது திருச்சி மின் நுகர்வோர் மையத்தின் விவரங்களை செய்தித்தாளில் தெரிந்து கொண்டு மையத்தின் ஆலோசகரை தொலைபேசியில் தொடர்பு கொண்டு தனது பிரச்சனையை தெரிவித்தார். புகாரின் அடிப்படையில் மின் ஆலோசகர் மற்றும் திரு.கார்த்திக் இருவரும் பெட்டவாய்த்தலையில் உள்ள மின் அலுவலகத்திற்கு சென்று இளநிலை பொறியாளரிடம் புகார் நிலை குறித்து கேட்டறிந்தனர். தற்போது மின் மீட்டர்கள் இருப்பில் இல்லாததால், பழுதடைந்த மீட்டரை மாற்ற தாமதமாகிவிட்டது என்றும், இரண்டு நாட்களில் மாற்றி தருவதாகவும் இளநிலை பொறியாளர் உறுதி அளித்தார். இரண்டு நாட்களுக்குப் பிறகு, மின்வாரிய அலுவலர்கள் புதிய மின் மீட்டரை பொருத்தியதாக கூறி, திரு.கார்த்திக் மின் நுகர்வோர் திருச்சி மையத்திற்கு தொலைபேசி வாயிலாக தனது நன்றியினை தெரிவித்தார்.

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Initiative of

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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

Understanding the Energy Crisis and its Impact on Food Security

Around a third of global electricity production capacity currently comes from low carbon sources, with 26% from renewables and around 10% from nuclear power. The remaining two-thirds come from greenhouse-gas emitting fossil fuels such as coal, gas and oil. Renewable energy sources like solar, wind and hydropower need to become a much bigger part of the global energy mix if governments around the world are to meet their net-zero commitments. Concerted action from the biggest emitting countries and blocs such as the US, China and the European Union (EU) will be crucial. So how are they investing in clean energy?

Clean energy comprised 67% of new electric generating capacity in the US during the first half of 2022, according to new data released by the Federal Energy Regulatory Commission (FERC). Wind and solar power contributed the lion's share of the mix, with geothermal, hydropower and biomass making up the balance. The remaining new electrical generating capacity came mainly from gas and coal. Renewable energy now makes up 26.74% of total available installed generating capacity in the US. That compares to 19.7% five years ago and 14.76% a decade ago.

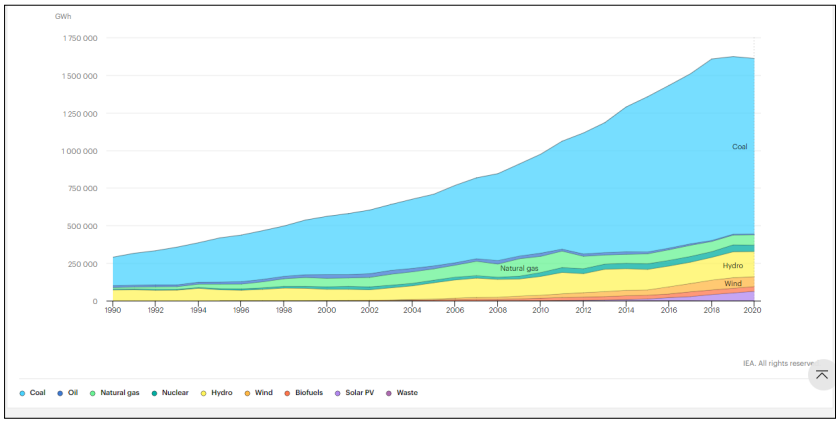
President Joe Biden signed the biggest US climate package into law this month, as he races to meet the country's carbon reduction target of 40% by 2030. The Inflation Reduction Act will provide a $369 billion investment in clean domestic energy production. A further $60 billion will be allocated to create millions of clean manufacturing jobs. The bill also includes tax credits and rebates to help reduce the cost of buying electric vehicles and installing solar panels and heat pumps in homes.

Source: Weforum, August 26, 2022

Publications / Regulations

- Bioenergy for the Transition: Ensuring Sustainability and Overcoming Barriers, August 2022, IRENA
- Understanding Gender Gaps in Wages, Employment and Career Trajectories in the Energy Sector, August 2022, IEA
- Updated List-I under Approved List of Models and Manufacturers (ALMM) order for Solar PV Modules, published on August 18 2022, MNRE
- State-wise installed capacity of Renewable Power as on 31st August 2022, MNRE

Electricity generation by source, India 1990-2020



Source: IEA