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Interruptions and restoration of electricity supply

Electricity has become a significant part of our day-to-day life. <u>Frequent</u> and unannounced supply interruptions have been a huge concern all over Tamil Nadu including the capital city. Considering the intensity of the problem, this article focuses on creating awareness around the standards that cover interruption and restoration of electricity supply in the state.

Interruption of electricity supply may occur due to issues like line fault/failure of transformer /equipment, planned shutdown/periodical maintenance of distribution network and sometimes due to the huge demand of electricity also. For instance, during peak summer days usage of air conditioners <u>increases the demand for power supply</u> which leads to tripping of the transformer.

It is the responsibility of the distribution licensee to plan and restore the power supply. For Tamil Nadu, Tamil Nadu Generation and Distribution Corporation Ltd. (TANGEDCO) is the distribution licensee. The Tamil Nadu Electricity Regulatory Commission (TNERC) notified the <u>Distribution Standards of Performance (DSOP)</u> <u>Regulations</u> in 2004 which provides for measures to be taken by the distribution licensee for restoration of power supply.

Incase of interruption, consumers should inform the local office of distribution licensee over telephone/calling helpline number <u>1912</u>, in person, etc. As per Chapter 2 (12) of DSOP, <u>Distribution Standards of Performance</u> the time taken for restoring the supply varies with respect to the locality and type of issue. The given table explains the time taken for different types of issues and locality.

Interruption due to	Power restoration time			
	Corporation	Urban municipalities	Rural	Hill Area
HT supply failure	1 Hour	3 Hour	6 Hour	12 Hour
Fault in Transformer structure / LT line / Pillar box	2 Hour	4 Hour	6 Hour	12 Hour
Fault in distribution transformer	24 Hour	48 Hour	48 Hour	48 Hour
Individual service connection fault	3 Hour	9 Hour	12 Hour (exclude 6.00 pm to 8.00 am)	24 Hour

In case of interruptions due to line fault/failure of transformer /equipment, then TANGEDCO will have to inform the complainant within 1 hour from the receipt of complaint (subject to availability of communications from both ends), the reasons for interruption and likely time by which power will be restored. In case of interruptions due to planned shutdown/periodical maintenance of distribution network, TANGEDCO should give prior notice in this behalf through newspapers.

Complaints of interruption at individual consumer premises in rural and urban areas other than corporation limits should be attended to between 8.00 am and 6.00 pm. Complaints received during night hours i.e., from 6.00 pm to 8.00 am shall be considered as complaints received at the start of working hours on the next day and restored as per the time limits explained above.

Compensation - If TANGEDCO fails to meet the details furnished above, the affected consumer is entitled for compensation by TANGEDCO. Compensation payable to the affected consumer is INR 50 for each 6 hours (or part thereof) of delay in restoration of supply subject to a maximum of INR 2000.

Compensation amount has to be paid to the consumer automatically in the next billing cycle through credit entry in the electricity bill. If the licensee fails to pay the compensation in the next billing cycle, that particular consumer has the right to claim by representing the issue to the designated employee of the TANGEDCO. As a consumer, it is important to be aware about the basic norms and being a responsible consumer.

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The Do-It-Yourself Energy Audit Series For Household Consumers (Part 6)

WATER CONSERVATION



In light of the water crisis in Tamil Nadu, conservation of water can be seen as the need of the hour. Apart from the independent cause of water conservation, adapting measures to save water at a household level can in turn help conserve electricity. This edition of the DIY Energy Audit Series will provide consumers with tips and tricks to save water as means to save electricity.

1. Do you use energy efficient pumps in your household?

Traditionally, in most households, water is delivered from water storage tanks in the top of the building and water provided by the local municipal corporation is pushed to such overhead tanks with the help of pumps installed in the premises. It is said that these pumps consume nearly 50% of a residential complex's <u>electricity bill</u>. Therefore, ensuring that the pumps are energy efficient and regularly maintaining them can help conserve electricity.

Best Practice: Purchase <u>BEE certified energy efficient pumps</u> to effectively reduce electricity consumption

2. Do you take conscious efforts to conserve electricity by reducing usage of water in your household?

Usage of water and electricity in households are interlinked; for, it takes a significant amount of electricity to deliver and treat the water we use in our daily life. From pumps to purifiers, water consumption at households largely depend on processes which come with a cost of electricity on a unit basis. Given the significance, reducing usage of water by <u>adapting measures to save water</u> will in turn help households to effectively conserve electricity.

Best Practices:



- Be sure to regularly check and repair leaks in pipes and fixtures to avoid excessive wastage of water.
- Ensure that the faucets and controls used in your restrooms and wash-area are water efficient i.e. disperses minimal water during usage.
- Use small sized water heaters since the amount of water heated determines the electricity consumed by water heater.
 - Turn off the tap while brushing your teeth and take shorter showers; For, a running tap is said to waste over <u>6 litres of water per minute</u>.



3. Do you run your washing machine efficiently to save electricity?

Washing laundry is said to make for <u>15% to 40% of the overall water consumption</u> in an average household and a Washing machine is a <u>costly appliance to operate</u>. Given the potential of the appliance to guzzle energy and increase washing costs, it is crucial to <u>run it efficiently</u>.

Best Practices:

- Always wash full loads. It takes approximately the same amount of energy to wash a partial load as it does to wash a full load.
- Avoid using the washing machine for drying clothes and line dry clothes as much as possible to save energy.
- Unplug the washing machine, when not in use to avoid <u>stand-by power consumption</u>.
- Purchase <u>BEE star rated washing machine</u>. More the stars, the more efficient the appliance.

Tamil Nadu News



TANGEDCO readies master plan to meet rising power demand

The Tamil Nadu Generation and Distribution Corporation's (TANGEDCO) master plan of infrastructure development to meet the burgeoning power demand in the Chennai Metropolitan Area (CMA) is now looking at creating more substations.

The five-year plan aims to put in place infrastructure works consisting of substations, lands to be acquired, underground cable network and the equipment needed to be installed in these substations. In a recent review meeting held for the Central Circle, Chennai, TANGEDCO has proposed to construct around 20 substations to meet the increasing power demand in the city in the coming years. In a city where electricity demand is expected to reach 4,000 mega watt (MW) in the next few years the new substations of varying capacities are expected to ease power disruptions.

A senior official of TANGEDCO said under the 13th master plan 20 substations, including a 230 kilo volt (KV) of gas insulated substation and 110 KV substation, have been planned to constructed. While the gas-insulated 230 KV substation is planned to be constructed at Thanikachalam Road, a 110-KV is planned to be commissioned at the B&C Mills located on Cooks Road near Perambur. The electricity department has planned to construct 18 substations of 33-KV capacity to improve the distribution network in highly congested localities to free up the additional burden expected to arise in the coming years.

Source: The Hindu, May 04, 2019

India News

Andhra Pradesh Approves DISCOM-Driven Rooftop Solar Program

The Andhra Pradesh Electricity Regulatory Commission (APERC) has approved a DISCOM-driven solar rooftop program proposed by the Eastern Power Distribution Company of Andhra Pradesh Limited (APEPDCL). The APEPDCL had petitioned the APERC to approve the DISCOM-driven solar rooftop PV program devised under the technical assistance program. APEPDCL had proposed two models for implementation of this program.

1) Customer-owned solar rooftop program with net-metering. The equated monthly installment (EMI) will be partly shared by the DISCOM on a net present value (NPV) neutral basis. This model is for Domestic Category B consumers with monthly consumption between 140 to 200 units. Rooftop solar PV systems will be of capacity 1 kW to 1.5 kW. **2**) Grid-connected rooftop solar PV program on developer mode under gross metering. Under this model, a developer will be selected through competitive bidding for the supply of power to APEPDCL for 25 years. The developer will utilize the rooftop spaces of willing consumers.

After examining the suggestions made by the stakeholders and the replies by DISCOM, the APERC noted that the program is only a pilot project and the first of its kind in the country to encourage solar rooftop installations by domestic consumers. The commission also observed that the targeted consumers are low income, subsidized consumers whose consumption is in between 100 to 200 units of electricity per month. This initiative taken by the DISCOM to provide a helping hand to such consumers by playing the role of a facilitator needs to be encouraged as the program will benefit both consumers and the DISCOM.

The APERC added that as there is no net financial burden on the DISCOM, it will accord the approval for the pilot project. The state commission has directed APEPDCL to submit the copy of the tripartite agreement and consumer consent form for approval. APEPDCL has also been ordered to submit the full status report with results after the completion of the pilot project. APERC, in its order, has also stated that when the DISCOM undertakes the full-scale implementation of the project, depending on the success or failure of the pilot project, the feasibility of adopting any of the suggestions with or without modifications will be appropriately considered to be incorporated.

Source: Mercom India May 21, 2019.



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Consumer Focus

The Petitioner was facing frequent power cuts and low voltages at his residence for over a period of two months. He met with the Assistant Engineer (AE)/Neelankarai and explained his problem. AE/Neelankarai assured the petitioner that the problems will be rectified soon. After a week, he filed a written complaint to AE/Neelankarai regarding the same; however no action has been taken with respect to this.

Following which, the petitioner approached the Consumer Grievance Redressal Forum (CGRF) for a solution. Based on the directions of the CGRF, the utility inspected the petitioner's area and reported that there was interruption because of High Tension and Low Tension line faults.

On the High Tension side, the jumper cuts were attended to and the obstructing trees were cleared to avoid frequent tripping of the feeder; on the Low Tension side, pillar maintenance work was carried out for maintaining a reliable supply. The Low Tension single phase 2 wireline was converted into Low Tension three-phase wireline. Based on the above, the voltage has been measured as 201V in that area.

As a result, the utility replied to the CGRF that the situation has improved. To prevent further issues and recurrences, the utility proposed that a new distribution transformer be erected in the area. The utility requested the petitioners to provide the land required in that area for erecting the transformer. The petitioner expressed satisfaction with the resolution.

ECC VOICE

சேலம் ராஜாராம் நகரை சேர்ந்த திரு. S.V. தண்டபாணி அவர்கள் தனது புதிய வணிக வளாகத்திற்கு கட்டுமனை பொது தற்காலிக மின் இணைப்பு பெற்று இருந்தார். வணிக வளாகம் கட்டி முடித்த பின், தற்காலிக மின் இணைப்பினை துண்டிக்கவும், நிரந்தர இணைப்பினை பெறவும் திரு. தண்டபாணி சேலம் மரவனேரி மின் வாரிய அலுவலகத்தை தொடர்பு கொண்டுள்ளார். தற்காலிக மின் இணைப்பினை துண்டிப்பதிலும் நிரந்தர இணைப்பினை பெறுவதிலும் அவருக்கு பல்வேறு சிக்கல்கள் ஏற்பட்டது. இது குறித்து சேலம் மின் நுகர்வோர் மையத்தினை தொடர்பு கொண்டு திரு. தண்டபாணி மையத்தின் மின் ஆலோசகரிடம் ஆலோசனை பெற்றார். மரவனேரி மின் வாரிய உதவி செயற்பொறியாளர் திருமதி. நளினி அவர்களை சேலம் மின் நுகர்வோர் மையத்தின் மின் ஆலோசகர் தொடர்பு கொண்டு, திரு.தண்டபாணியின் வணிக வளாகத்தின் தற்காலிக மின் இணைப்பினை துண்டித்து, நிரந்தர இணைப்பாக மாற்றி தருமாறு கேட்டுக் கொண்டார். இதன் அடிப்படையில், வணிக வளாகத்திற்கு நிரந்தர மின் இணைப்பு அளிக்கப்பட்டது.

சேலம் மின் நுகாவாா் மையம் எடுத்த முயற்சி காரணமாக தனது மின் இணைப்பு மாற்றம் பற்றிய பிரச்சனை தீா்த்து வைக்கப்பட்டது என்று திரு. தண்டபாணி அவா்கள் நன்றியினை தெரிவித்தாா்.

சேலம் மின் நுகா்வோா் மையம்

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Initiative of



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

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World News

China Approves Over 20 GW of Subsidy-Free Wind and Solar Projects

China has approved over 20 GW of solar and wind projects as part of its plan to install unsubsidized renewable energy projects in the country. The 20.76 GW of capacity has been split into wind 4.51GW, solar PV 14.78GW and distributed trading pilot projects 1.47 GW. The announced solar grid parity projects have been distributed across 16 provinces with Guangdong taking lead at 2.38 GW.

Current

In an emailed statement, Frank Haugwitz, the director of Asia Europe Clean Energy (Solar) Advisory Co. Ltd (AECEA), commented, "14.78 GW of solar projects consists of 168 projects, with the average project capacity being approximately 90 MW. The latter is surprising, given that the capacities of the recent grid parity projects were in the triple-digit MW range, often between 200 MW to 300 MW and up to 700 MW.

According to Frank, "AECEA assumes that the less than 100 MW average capacity of these grid parity projects might have been influenced by last year's module price erosion as well, given that the majority of projects are within provinces that are home to comparatively high retail electricity tariffs, which enables the execution of such projects. If one takes a closer look at the distribution of projects across the 16 provinces, it reveals that except Zhejiang, Fujian, and Hainan, all eastern coastal provinces will witness the execution of such projects. However, equally important is the form and extent of local support granted to these projects."

Source: MERCOM INDIA, May 23, 2019.

Publications / Regulations

- Renewable Power Generation Costs in 2018, May 2019, International Renewable Energy Agency (IRENA)
- Tracking SDG7: The Energy Progress Report (2019), May 2019, International Renewable Energy Agency (IRENA)
- World Energy Prices 2019 edition, May 2019, International Energy Agency • (IEA),

BEV -**Battery Electric** Vehicle llin PHEV -Plug-in Hybrid Electric Vehicle 2013 2014 2017 2018 China PHEV Europe PHEV China BEV Europe BEV United States BEV United States PHEV Other BEV Other PHEV - World BEV

Electric Vehicle growth around the World

Source: Global EV outlook 2019, IEA, May 2019.