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Current News
மின் செய்திகள்

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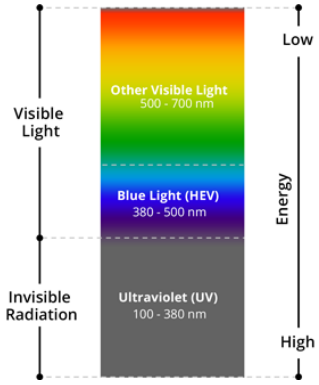
Do Energy Efficient LEDs affect our eyes? (Part 1)

Introduction: Products are constantly evolving as a result of technological advancement and consumers are able to access better versions of the same product. These technologically advanced products are seen as more efficient and, often environmentally friendly. However, not much attention is paid to the health effects of the technologically advanced product or service. This is especially so in the lighting sector.

Nowadays Light Emitting Diodes (LED) lights are technologically superior to incandescent bulbs and Compact Fluorescent Light (CFL). LEDs consume less amount of power and produce similar amount of lumens compared to incandescent and CFLs. In addition, it does not contain harmful substances like Mercury which are present in CFLs. The table explains the power consumed by Incandescent, CFL and LED bulbs to produce 800 lumens of light: Though LED bulbs are energy efficient and eco-friendly, they have a negative impact on our health, especially our eyes, about which we are unaware of.

	Wattage	Lumens	Life Span (hours)
Incandescent bulbs	60	800	1,000
CFL	15	800	5,000
LED	8	800	50,000

Basics of Light spectrum : To understand how LED bulbs affect our eyes, it is important to understand the basics of light spectrum. The light spectrum is essentially the many different wavelengths of energy produced by a light source. In light spectrum, there are different shades of visible light such as red, orange, yellow, green and blue. And there exists an inverse relationship between their wavelength and energy. While the red light rays have longer wavelength with less energy; the blue light rays have shorter wavelength with high energy. The wavelength of the blue light is approximately between 380 nm and 500 nm, which makes it one of the shortest and highest-energy wavelengths in the visible light spectrum. Due to the higher amount of energy produced, it is said that, over time, *prolonged exposure to the blue end of the light spectrum or blue light could cause serious long-term damage to our eyes.*



Sources and effects of blue light

Sunlight is the main natural source of blue light. Other artificial sources that emit High Energy Visible (HEV) blue light include LED bulbs, mobiles, tablets, laptops, desktops and televisions. The blue light is said to have a range of effects on humans. The wavelengths from the blue light have certain beneficial effects during daylight hours such as boosting our attention, increasing our responsiveness and elevating our mood.

On the other hand, they are disruptive at night. Before the advent of artificial lighting, sun was the major source of light. And our exposure to blue light emitted by the sun was limited to daylight hours. But with technological advancements, our exposure to HEV blue light has been on the rise, especially after sundown. Studies suggest that such prolonged exposure to the blue light would have negative effects on health. ***(to be continued)***

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Tamilnadu News

As calamities strike, TANGEDCO losses spiral

Every time there is a squall or a cyclone, power outages follow. Snapped cables, short circuits, uprooted poles; the damages to the electrical overhead units leave residents and industries in a fix. But it's Tangedco that is worst hit. Since the 2015 floods, each year the DISCOM has lost nearly Rs1,000 crore worth power poles, transformers, substations and distribution lines.

There has been no government support to meet these damages and the discom's demand to the finance commission for a separate allocation to meet natural calamities has also not been met. This year, losses due to Cyclone Gaja initially estimated to be Rs1,000 crore, may cross Rs2,000 crore, say officials as replacing transformers and feeder lines in substations alone will cost nearly Rs1,000 crore.

Setting them back by at least Rs2,000 crore were the 2015-16 floods that affected infrastructure in Chennai, Tiruvallur and Kancheepuram districts. "We had to write off not less Rs2,000 crore as loss and it was reflected in the balance sheet for that financial year. The very next year, once again Chennai and nearby districts were affected due to Cyclone Varda. "Unlike Cyclone Gaja where the power poles and transformers have been damaged, in 2016, it was the transmission towers which were damaged as the wind speed was more than 140km," said the official.

As a remediation, transmission lines were changed to underground cables but high investment costs are an issue. "In Cuddalore district we wanted to replace power poles with underground cables. The immediate investment was high but this is the most effective solution to prevent infrastructure losses but the project is yet to see light," he said. Tangedco was to break even in the present financial year but after the present loss in the delta districts, it may have to wait longer.

Source: The Times of India, 21 November, 2018.

India News

India to have 6500 electric vehicle charging stations in next 5 years'

EV Motors India said it plans to set up 6500 Electric Vehicle (EV) charging stations over the next five years in partnership with DLF, ABB India and Delta Electronics, at an investment of $200 million.

The charging outlet named PlugNgo will be installed at business and residential complexes across cities, and will be networked and connected to its cloud-based integrated software platform, the company said in a re-lease.

"Towards the vision of a large fleet of EVs across the country, a co-ordinated approach between real estate developers, vehicle OEMs and charger manufacturers is necessary," said Vinit Bansal, Managing director, EV Motors India.

PlugNgo plans to set up 20 outlets in Delhi-NCR in the next one year, followed by expanding its reach to other cities such as Bengaluru, Chandigarh, Jaipur, Ahemedabad, Kanpur, Kolkata, Mumbai, Pune, Hyderabad, Amritsar, Bhubaneshwar, Cochin, Indore and Chennai over the next year, the release said. Besides, the Delhi based startup will also be setting up service centres at each of these cities, it added.

Source: The Times of India, 28 November, 2018.

Consumer Focus

Facts

There is an electric distribution pole situated in the middle of a busy road which has been badly damaged. This road forms one of the entrance for the 100ft road in Taramani. He has repeatedly complained to the AE Velachery and asked them to shift the pole to the corner of the road. No response was received. Hence, he has approached the forum.

Contentions

Petitioner :

The petitioner further contends that the post is in damaged condition which may cause any loss to life and property. Hence he has requested to redress the situation.

Respondent :

The respondent reported that the damaged pole was inspected and necessary work was carried out. Hence, the issue was rectified. Shifting the pole to the far corner is not feasible for want of sufficient clearance. However the Over Head line will be converted to Under Ground cable system in due course of time.

Observation and Judgement :

The petitioner had not turned up for the hearing. As the respondent stated, the necessary coping works had been done in the pole and shifting of the same is not feasible for want of compliance.

ECC Voice

திருநெல்வேலி மண்டலத்தின் மின் நுகர்வோர் உரிமை பாதுகாப்பு காலாண்டு ஆலோசனைக் கூட்டம் திருநெல்வேலி தலைமைப் பொறியாளர் தலைமையில் 06.10.2018 காலை 11.30 மணிக்கு மண்டல அலுவலகத்தில் நடைபெற்றது. இதற்கான கடிதம் கிடைக்கப்பெற்று திருநெல்வேலி மின் நுகர்வோர் சேவை மையம் அக்கூட்டத்தில் கலந்து கொண்டு 4 புகார்களை எழுத்து மூலமாக தலைமைப் பொறியாளரிடம் அளித்தது. அதில் 2 புகார்களுக்கு உடனடியாக முடிவு எடுக்கப்பட்டது. முதல் புகாரில் ராதாபுரத்தை சேர்ந்த திரு. பாலவேச முத்து என்பவருக்கு காப்பீட்டு தொகையான ரூ.1,10,000/- காசோலையாக திருப்பி அளிக்கப்பட்டது. இரண்டாவது புகாரில் பாரதியார் நகரை சேர்ந்த திரு. நடராʃன் என்பவருக்கு அதிக கட்டணமாக வசூலிக்கப்பட்ட ரூ.1521/- அடுத்து வரும் மின்கட்டணத்தில் சரி செய்து கொள்வதற்கான உத்தரவு அளிக்கப்பட்டது. மீதமுள்ள 2 புகார்களான ஊராட்சி ஒன்றிய தொடக்கப்பள்ளி களின் (அறைக்குளம் மற்றும் தருவாய்) அருகாமையில் செல்லும் மின் பாதைகளில் பாதுகாப்பு வசதி செய்ய வேண்டும் என்ற கோரிக்கையின் மீது தக்க நடவடிக்கை மேற்கொள்ள சம்பந்தப்பட்ட பொறியாளர்களுக்கு உத்தரவு வழங்கப்பட்டது. தமிழ்நாடு மின் உற்பத்தி மற்றும் பகிர்மான கழகம், திருநெல்வேலி மேற்கூறிய புகார்களின் மீது உடனடியாக நடவடிக்கை மேற்கொண்டு திருநெல்வேலி மின் நுகர்வோர் சேவை மையத்தின் மீதுள்ள நன்மதிப்பை அதிகப்படுத்தி உள்ளது.

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CAG
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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

Construction on $4 billion Indonesia EV battery project begins January 2019

Developers will begin building a lithium battery project in Morowali, on the Indonesian island of Sulawesi, on January 11, Coordinating Maritime Minister Luhut Pandjaitan said. The $4 billion project involves investors from South Korea, Japan and China, Pandjaitan told reporters, without naming the companies involved or providing further details on the project.

"Looking at its resources, Indonesia will become the main player in lithium batteries," Pandjaitan told reporters, referring to forecasts for surging demand for batteries for electric vehicles.

Major nickel producers have already been eyeing Indonesia's large nickel laterite ore reserves prized for nickel pig iron used in stainless steel production for use in Battery materials. But nickel is also a vital ingredient for the lithium-ion batteries used to power electric vehicles, where demand is set to accelerate over coming years.

Indonesia, with reserves of both nickel and cobalt used in lithium battery cathodes, is well positioned to meet that demand amid advancements in electric vehicle technology, the minister said.

"We will control the world market," Pandjaitain added. "We are lucky we are starting in the third generation of lithium batteries, so it's cheaper."

Analysts, however, have cast doubts on how quickly such plans can be carried out, as some of the required nickel smelter technology is complicated.

The latest surprise entrant in the rush to grab a slice of the sector has been PERTAMINA, Indonesia's state energy company, which may team up with state miner Aneka Tambang to make batteries.

"We hope at least by the end of 2020 or the beginning of 2021 we can produce batteries commercially ourselves," Herutama Trikoranto, Pertamina's senior vice president for research and technology said. The company has already completed a pilot project that needed to be scaled up, he said.

Source : The Times of India, November 30, 2018

Publications/Regulations

- Biogas based Power Generation & Thermal Application Programme (BPGTP), BPGTP, MNRE, November 2018
- Report of the high level empowered committee to address the issues of 'Stressed Thermal Power Projects', Ministry of Power, November, 2018

Global electricity price in 2018, Statista, November 2018