

Lightline

FROM THE CHAIR **CRAIG PALMER LCNZ DEPUTY CHAIR**



Welcome to the Autumn 2024 edition of Lighting Council New Zealand Lightline.

As we enter May and the new fiscal year, many of us will be reflecting on the challenges and successes of the last twelve months and planning how to best uncover opportunities in the coming year. FY25 certainly looks to be a year, like FY24, that will present its fair share of challenges. But there is light at the end of the tunnel and recent NZ market signals indicate better days are on the horizon.

For lamp importers, the new fiscal year also brings the mandatory annual requirement to supply sales data to the Energy Efficiency and Conservation Authority (EECA) by providing details of linear and compact fluorescent lamps. In an environment now clearly dominated by LED lighting technology, it is a curiosity that this data is still required, however, as there remains a mandatory Minimum Energy Performance Standard (MEPS) regime in place for these lamp types, diligent suppliers continue to report sales movements of these mercury containing relics from a bygone era. The fluorescent lamp sales data reported can at times reveal surprising information. It is not remarkable that compact fluorescent lamp sales in 2023 represented another year-on-year halving of the volumes, a decline of over 93% from 10 years ago. But more surprising was the uptick of 29% for linear fluorescent lamps for last year. This was firmly against the trend of the declining sales in each of the previous 10 years.

As I pulled together my own company sales data for the purposes of the EECA required reporting, I reflected on the impact of global changes in both regulations and supply chains. Did awareness of a coming scarcity perhaps encourage some to stockpile on linear fluorescent lamps in 2023 rather than make the more pragmatic shift to LED?

In late 2023 the European Union (EU) banned the production and importation of linear and compact fluorescent lamps under the EU Restriction of Hazardous Substances (RoHS) Directive. Last year the fifth meeting of the Conference of the Parties to the Minamata Convention (COP5), 147 countries collectively decided to phase out fluorescent lighting by the end of 2027. This is in addition to the already agreed ban from the end of 2025 on compact fluorescent.

Fluorescent technology has indeed served the world well for over 80 years, but the time is now right to wholeheartedly embrace better solutions - ones that are better for people, planet, and profit.



LIGHTING COUNCIL NZ WHO WE ARE AND WHAT WE DO

Lighting Council New Zealand is an industry association with around thirty member companies, representing NZ lighting industry interests to government agencies, regulators, and other industry and professional associations, spanning commercial, industrial, municipal, and residential lighting.

More information on the LCNZ website: [here](#).



SUSTAINABLE BIO-MATERIALS FOR NEW GENERATION LUMINAIRES



Considering low-carbon environmentally friendly luminaires is not only about thinking of energy efficiency, refurbishments, or recycled materials. There is a coming wave of new generation luminaires employing fresh takes on environmentally friendly materials, using engineered wood, plywood, wool-felt, flax, linen, and a host of bio-plastics. New business models using circular processes and manufacture-on-

-demand 3D printing of bioplastics are now a reality, reshaping economics as well as supply-chain logistical possibilities. A brief survey of some international advancements are:

From Sweden

- Pendant luminaires with light-domes made from wool waste previously discarded as unsuitable.
- Linear LED office luminaires with bodies made from pine-plywood from renewable sources.
- Home and hospitality luminaires with diffusers made from flax and linen providing natural softness along with sophisticated lighting ambience.



From Netherlands

- Office LED panel luminaires 3D printed using recycled plastics.
- Street light and pathway luminaire bodies made from bio-polyethylene.
- Decorative pendant luminaire diffusers 3D printed on demand using recycled polycarbonate watercooler bottles.

From Spain

- Under-veranda IP66 rated outdoor luminaire bodies and diffusers made from bio-polycarbonate from waste-biomass materials.

From UK

- Retail display track spotlights, using modular building-block elements 3D printed with bio-polymers.
- Street light luminaires with wood bodies made from laminated scrap oak from environmentally certified forests.
- Industrial luminaire bodies made from recycled polycarbonate waste.

From NZ

- Decorative pendant luminaires made from plywood from environmentally certified forests. With flat-pack logistics the long-haul freight impact to distant markets is minimised.
- Office and café pendant luminaires with acoustic polyester fibres using recycled material.
- Highbay pendant luminaires with refractors 3D printed using a made-to-order business model
- Most NZ lighting companies are using recycled paper packaging, some have carbon certified distribution partners, some are calculating their carbon emissions with some offsetting to zero.
- Returnable flat-pack aluminium transport crates are displacing waste creating one-way wood or plastic pallets. Low-cost GPS tracking, assists deliveries and enables speedy returns.

When will the bio-materials groundswell in NZ grow beyond the tipping point to be business-as-usual? That's hard to tell, but sustainable options are progressively expanding.

Regions like the EU and California have used 'more stick than carrot' with mandatory eco-design directives. With NZ's light-touch

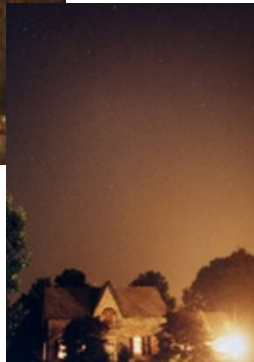


regulatory approach, less developed recycling facilities, tortuous geography, and variable recycling feedstocks, progress is more steady than ascendant. The real indicator of market transformation is when the economic forces of 'market pull' surpass those of 'producer push'.



IEC STATEMENT ON LIGHT POLLUTION

The global standards organisation for electrical and electronic products, the International Electrotechnical Commission (IEC - Geneva), has recently released a position statement on light pollution. IEC TC 34 Statement on Light Pollution' from IEC committee 'TC 34 Lighting'



Free availability - Accessible [here](#)

As light pollution is a contentious and widely debated issue globally, a statement was requested by the IEC management board to provide an internationally applicable standardisation viewpoint giving context on the many factors that constitute good outdoor lighting and light pollution minimisation.

LCNZ Executive Director Bryan King is convenor of the IEC TC 34 Environmental Working Group and was project leader for this initiative. It took many rounds of debate among IEC member countries to reach consensus on the statement.

The statement highlights that standardisation to combat light pollution has two facets:

- Lighting product and standardisation - responsibility of IEC.
- Lighting application standardisation - responsibility of ISO and CIE.

Lighting planners need to appreciate that the two facets need to work together to ensure good astronomical and ecological outcomes, and to provide fit-for-purpose human safety, visual comfort, and user amenity.

The important point is the focus on outcomes. Luminaire designers and manufacturers may take all due care with the provision of appropriate equipment, conscious of light pollution minimisation, but if equipment is ineptly deployed, or is poorly installed, commissioned, operated,

or maintained, the light pollution outcomes will likely be unacceptable. This clear demarcation of scope and boundaries is of high relevance to lighting designers and equipment suppliers, as well as to government policymakers, local council regulators, property developers, and for 'green building' projects.

Light pollution questions raise complex issues that demand holistic solutions requiring multi-party expertise. This statement reinforces the fundamental need for trained and experienced lighting designers, who fully understand the relevant local standards, local planning bylaws, who are supported with realistic project budgets.

With the plethora of new luminaire and controls technologies now economically attractive, expert design and project planning input is essential to avoid wrong choices or misapplication. Collaboration of designers, suppliers, installers, and asset owners is the key to excellent lighting outcomes and fewer unintended consequences.

For further reading on light pollution the following guidance documents can assist:

- LCNZ and IESANZ-NZ - Good Lighting and Dark Skies. [Link here](#)
- LCNZ - Better exterior home security lighting. [Link here](#)
- Institution of Lighting Professionals UK - The reduction of obtrusive light. [Link here](#)



TECHNICAL TIP

ESSENTIAL ATTENTION FOR OBSOLETE LUMINAIRES

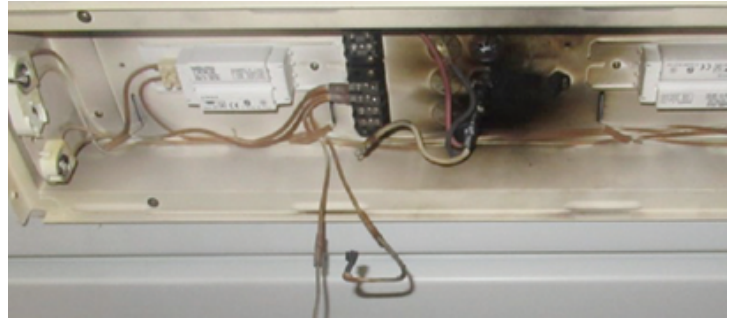
In recent months Worksafe Energy Safety have been in discussion with LCNZ about a reoccurrence of NZ commercial building fires caused by failed power factor correction capacitors in fluorescent and High Intensity Discharge (HID) luminaires.

This has again highlighted the need for close monitoring of aging capacitors and the need for cyclical replacement, or preferably, replacement with vastly more efficient LED options.

Fluorescent and HID luminaires installed in New Zealand over the past forty years or so use readily replaceable power factor correction capacitors. It is essential that periodic maintenance includes replacing heat-aged components to ensure they operate safely. Over the last fifteen years LCNZ has publicised the need for such regular maintenance.



HID highbay type luminaires are typically used in factories and warehouses and include metal halide (MH), high pressure sodium (HPS), and mercury vapour (MV). These are all obsolete technologies and are more than ripe for replacement with LED which have substantially lower energy use, maintenance needs, and operating costs. Capacitors have a life span of up to ten years and must be replaced within the ten year period.



Indicators of legacy lamp and luminaire neglected maintenance include:

- Failed lamps
- Cycling lamps
- Discoloured lamps and components
- Crumbling plastic of internal components
- Hesitant lamp starting
- Reduced lamp output
- Heavy internal dirt accumulation

For very good reasons, LED is now the dominant technology, so in 2024 it is not a matter of replacing capacitors, it is a LED upgrade opportunity. With the building insurance industry now focused on fire risk and asking for thermal imaging inspections of electrical assets, now is the right time to upgrade to LED.



PEOPLE

DAVID DICK, AUCKLAND TRANSPORT



David Dick, the long term Manager of Street Lighting at Auckland Transport (AT) retired in February. David's noteworthy leadership and pioneering methods over many years should not go unnoticed by the wider lighting community.

Since 2010 the AT program to upgrade Auckland region street lighting to best practice has been widely observed and emulated. Assisted by NZTA accelerated financial subsidies, AT lead the way for New Zealand in implementing international best practice for lighting design, luminaire procurement, smart controls, and optimised operations. AT owns the largest street lighting network in Australasia with 127,000 lights and through installing LED technology with an internet-based central control system, have reduced energy use by 60%.



Other Road Controlling Authorities have benefitted from the experience gained from this fundamental work, which paved the way with NZ methods for pre-qualification of LED luminaires, large scale procurement, smart internet central control systems, and working with the Electricity Authority for using smart controls as a street lighting energy meter.

David's outstanding contribution to best practice in public lighting is much appreciated by Lighting Council New Zealand.



STANDARDS

NEW MULTI-FUNCTION POLES(MFP) TECHNICAL SPECIFICATION

Standards Australia
Technical Specification



SA TS 5386:2024 Multi-function poles was published in March 2024. This Technical Specification (TS) provides guidance for the specification and procurement of multi-function poles (MFPs) for lighting, sensors, cameras, cellphone transceivers, and other road management devices.

Specifying and procuring MFPs (sometimes called smart poles) can be a complex process due to the multitude of possible lighting, sensing, and communication options. This all-new TS assists with demystifying the technology and application of MFPs for use in town centres, plazas, urban streets, and pathways. MFPs are often integrated with Internet of Things (IoT) modules for more economic operation of smart city functions such as CCTV, LED

signs, EV charging, and for real-time sensing of physical parameters like rainfall, airborne particulates, noise, vibration, vehicle and pedestrian traffic.



Although this TS is a Standards Australia publication it will be of much use to NZ lighting suppliers, consultants, and local council asset managers.

The TS is available from Standards Australia - AUD \$113.50
<https://store.standards.org.au/product/sa-ts-5386-2024>



AWARDS

IEASANZ NZ LIGHTING DESIGN AWARDS 2024- OPEN FOR REGISTRATION



The IESANZ NZ Lighting Awards programme for 2024 is now open and awaiting entries. The entry period closes on 30th June.

This year, there is an Early Bird discount allowing free entry for submissions that are received no later than 15th May 2024, after which entry fees will apply.

Details on how to enter are available on the awards website [here](#)

For general queries, email Awards@iesanz.org



STANDARDS NZ - ISO LIGHTING ENERGY CONSULTATION

On 7 May Standards NZ started the public comment consultation period for the SNZ adoption of ISO Technical Report ISO/CIE TR 3092:2023 Light and lighting - Energy performance of lighting in buildings - Explanation and justification of ISO/CIE 20086. This publication is the anticipated companion document to ISO/CIE 20086:2019 Light and lighting - Energy performance of lighting in buildings, which was adopted as NZS 20086 in 2022.



To facilitate flexible lighting by providing 'the right light at the right place at the right time' TR 3092 provides guidance on calculation and reporting for lighting energy performance using smart luminaires and digital control systems. These technologies deliver constant light output, light output optimisation (dimming and trimming), and controls functionality using real-time daylight and occupancy sensing, for 'next level' energy performance and user comfort.

TR 3092 is part of an integrated suite of standards publications from the ISO TC 274 'Light and Lighting' committee, whose core topics include lighting for workplaces, lighting energy performance and lighting systems commissioning

The suite of standards, when adopted, will assist designers and suppliers to deliver international best practice in lighting design, smart luminaire and control systems application, and energy and emissions reporting. LCNZ actively contributes within the ISO TC 274 international committee, with regular face-to-face participation at venues in Asia and Europe.

The draft standard, and full details on the SNZ commenting process are available via the weblink [here](#).

EVENTS

SYMPOSIUM - NOCTURNAL HARMONY: LIGHTING RESPONSIBLY - AUCKLAND 2 AUGUST 2024



Massey University and the Illuminating Engineering Society of ANZ (IESANZ) are jointly hosting a one-day Symposium on Friday, 2 August 2024, at the Massey Albany Auckland campus. The theme is 'Nocturnal Harmony: Lighting Responsibly'. The symposium speakers will provide a wide range of perspectives on the highly topical subject of outdoor lighting.

The event will be supplemented by a trade show, which will feature exhibits related to the responsible lighting theme. There is a special screening of the movie 'The City Dark' at the Bridgeway Cinema Northcote the night before the symposium.

Sponsorship and trade show exhibitor packages are available:

- Queries on sponsorship or trade show: mbernard@xerolighting.com.
- All other queries to: tracy.bronlund@pierlite.co.nz



STARLIGHT CONFERENCE

TOWARDS A DARK SKY NATION - LAKE TEKAPO 20-23 OCTOBER 2024



The New Zealand Starlight Conference is an international conference on dark sky protection at Lake Tekapo on 20-23 October 2024. The organizers are the Aoraki Mackenzie International Dark Sky Reserve and the Royal Astronomical Society of New Zealand.

The organisers are seeking to engage with lighting designers and

the lighting industry to hear about latest lighting technologies and solutions, to find ways that can minimise light pollution. The participation of lighting specialists is sought to help to find dark sky friendly solutions that maintain safety at night and provide the necessary illumination for human activity

The Starlight Conference website is at: <https://starlightconference.org.nz>

MEMBER PROFILES



**Simon
Jamieson**



G-LIGHT (NSG TRADING LTD)

Auckland based NSG Trading Ltd is an innovative company in the LED lighting industry in New Zealand, specialising in high-quality LED lighting solutions. Established in 2011, NSG Trading Ltd has quickly gained recognition for its commitment to customer satisfaction.

Flagship brand, Glight LED, embodies dedication to providing technology that reduces energy consumption while delivering superior performance and durability.

For residential and commercial applications, the diverse range of Glight LED products caters to all lighting needs, offering solutions that are both environmentally friendly and cost-effective.

With a team of experienced professionals and an efficient and reliable supply chain, NSG Trading Ltd ensures the highest standards of quality and reliability in every product we deliver. Our commitment to research and development drives continuous innovation, to stay abreast of industry trends and meet the evolving needs of our customers.

As a customer-centric company, NSG Trading Ltd places great emphasis on building long-term partnerships for mutual success. We strive to provide personalized service and support, ensuring that our clients receive lighting solutions tailored to their specific requirements.



MEMBER PROFILES



**Dennis
Grant**



LUMAX TECHNOLOGY LTD

Dennis Grant is the General Manager of Christchurch based Lumax Technology, a business providing essential commodity lighting products to exclusive electrical wholesalers in the New Zealand market.

Dennis has over fifty years in the lighting industry in both Australia and New Zealand. He studied lighting engineering and design at RMIT University Melbourne under Australian lighting icon Kevin Poulton, at a time before computer-based lighting design software and when slide rules were in vogue.

Dennis has been involved in establishing lighting operations in Australia, New Zealand, UK, and Asia, working with leading architects, engineers, and builders in many major projects, including the only Australian project of renowned New York architect I M Pei.

As Commercial Lighting Manager at Kempthorne Lighting Australia Dennis managed the only NATA Accredited optics laboratory in Australasia. He also managed lighting projects for Melbourne underground transport stations, the Regent Hotel Sydney, IBM Headquarters, as well as the High Court of Australia. Having established Davis Lighting Australia, as Group Marketing Manager, Dennis was involved with lighting supply to the tallest building in the world, the KLCC Twin Towers in Kuala Lumpur.

Years of lighting supply, industry experience, and qualifications ensures Lumax Technology are able to offer a unique supply path in the New Zealand market.