

Lighting Leaders Forum

David Crossley
National Technical Manager

- Lighting efficiency regulation.
- Exit and emergency lighting non-compliance issues
- HID phase out
- Non-compliant suppliers
- EESS database issues
- New Zealand regulations
- Solar Lighting technical specification



Lighting efficiency regulation

Halogen lamp phase out

- New regulation commences 4 October 2025.
- No importation after 3 October 2025.



To be phased out

- E14, E27, B15,
B22, GU10
≥ 10 W



Continued regulation

- ELV halogen lamps can continue to be supplied after being tested and registered (GEMS).
- Remembering MR16 must be $\leq 37W$.



Halogen phase out

- Five years grandfathering allowed to sell out remaining stock.

i.e. Until 3 October 2030.



LED lamp regulation

- Energy ministers support.
- Assistant Minister Wilson is expected to sign off soon.
- Regulation would commence 12 months later.



LED lamp regulation

- Scope: Single and double cap LED lamps.
- Exclusions:
 - Aircraft lights;
 - aeronautical ground lamps;
 - UV lamps;
 - photosynthetic lamps;
 - colour tuneable lamps;
 - fixed beam angle $< 10^\circ$
- Regulation includes product testing, packaging marking, registration.



Product testing

- *AS/NZS 5341: 2021 LED lamps – Test methods – Energy and functional performance.*
 - Electrical properties
 - Photometric and colorimetric properties
 - Lamp life and endurance
 - Flicker, stroboscopic visibility, blue light hazard, UV hazard
- Alternative test standards include: *CIE 025/E:2015; EN13032-4; ANSI/IES LM-79-19.*



LED lamp regulation

Marking

- Lamp: luminous flux (lm); CCT (K).
- Packaging:
 - Model;
 - Barcode;
 - Luminous flux (lm) (No smaller font size than power marking);
 - Halogen equivalence (if stated, i.e. not mandatory).
 - Luminous efficacy
 - CCT
 - For directional (beam angle)
 - Voltage and cap type.
 - $L_{70}B_{50}$ lifetime
 - Rated power (W)
 - Standby power (unless zero)



LED lamp regulation

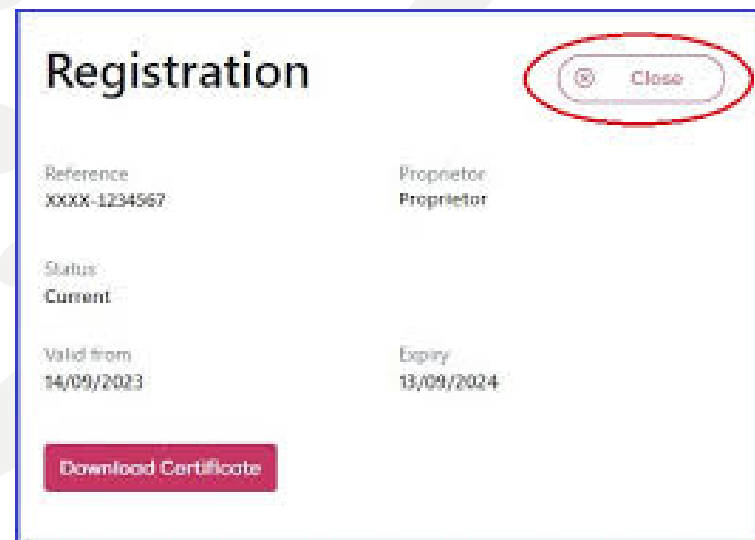
- Packaging marking (cont.)
- CRI (If less than 80 then mark the outdoor/industrial application)
- Link to compatible dimmers (if dimmable).



LED lamp regulation

Registration

- Families
 - Test report - lowest efficacy model.
 - Same rated voltage.
 - CRI bands
 - Lamp lifetime bands
 - Linear – same cap
 - All dimmable or non-dimmable
 - All directional or non-directional
 - All LED filament or non-filament
 - Same reference control settings
 - Limit of 100 models
 - 1 special family



A screenshot of a 'Registration' form. The title 'Registration' is at the top left. A 'Close' button with a red border is at the top right. The form contains the following fields:

Reference XXXX-1234567	Proprietor Proprietor
Status Current	
Valid from 14/09/2023	Expiry 13/09/2024

At the bottom, there is a red button labeled 'Download Certificate'.

Exit and emergency lighting

Non-compliance issues

Exit and emergency lighting

- The replacement of dual function exit/ emergency signs with single function exit signs is leading to non-compliant emergency lighting.

**Electric battery backup
dual function (exit &
emergency)**



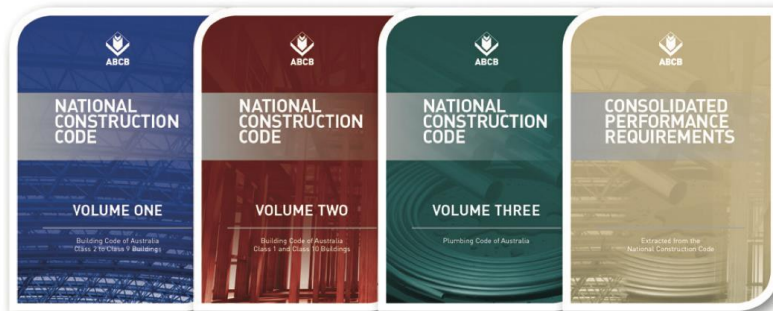
Hybrid photoluminescent exit sign



Exit and emergency lighting

- Exit signs guide the way to a building exit.
- Emergency lighting illuminates the floor and surroundings so occupants can quickly and safely move through a space, avoid hazards and quickly open exit doors.
- Both are needed and equally important.

The National Construction Code



STANDARDS
Australia

AS/NZS 2293.1 requirements for emergency lighting.

Emergency lighting must be installed within:

- 2m of exit doorways, intersecting corridors, change in directions, change in floor level, stairways; and
- Illuminance requirements at floor level has minimum requirements.

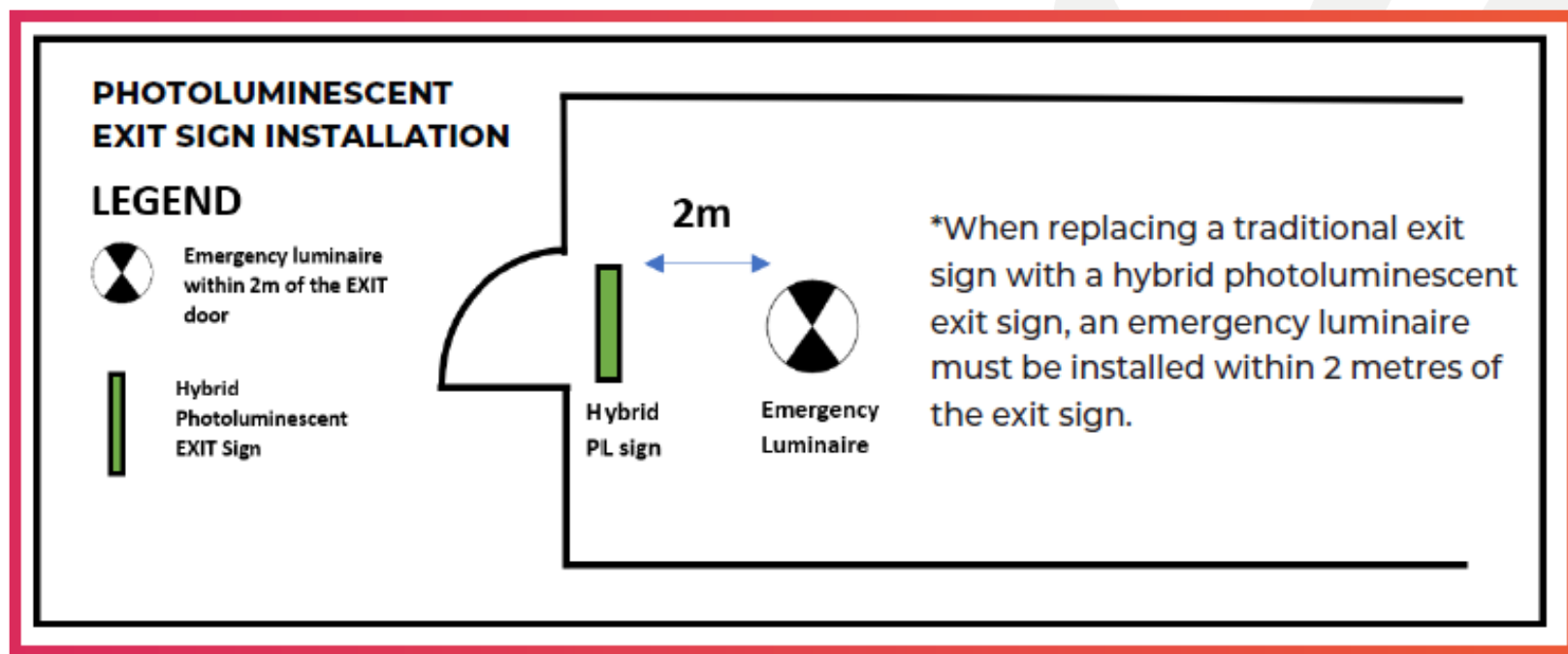


STANDARDS
Australia




Exit and emergency lighting

- When hybrid glow in the dark exit signs replace traditional exit signs, an additional emergency light must, in almost all cases, be installed – Clause 4.5 of AS/NZS 2293.1.



Exit and emergency lighting

Flyer informs the market of this compliance and safety issue.



Lighting Council
AUSTRALIA

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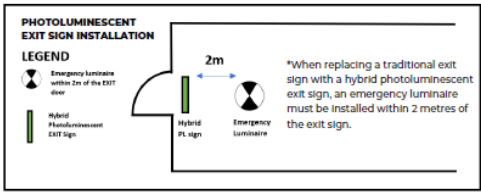
Lighting Council Australia is the peak body for the lighting industry in Australia. Lighting Council Australia is also a nominating organisation providing technical expertise to the Standards Australia committees which develop the standards for exit and emergency lighting systems in Australia.

Beware of Compliance Issues Photoluminescent Exit Signs

Hybrid Photoluminescent exit signs are not direct replacements for traditional Exit signs.

There is an alarming practice emerging regarding the installation of Hybrid Photoluminescent exit signs in a manner which is non-compliant under Australian regulations.

When Hybrid Photoluminescent exit signs are used to replace traditional exit signs, an additional emergency light must, in almost all cases, be installed within 2 metres of the Hybrid Photoluminescent exit sign. (Clause 4.5 of AS 2293.1)



PHOTOLUMINESCENT EXIT SIGN INSTALLATION

LEGEND

- Emergency luminaire within 2m of the EXIT door
- Hybrid Photoluminescent EXIT Sign

2m

*When replacing a traditional exit sign with a hybrid photoluminescent exit sign, an emergency luminaire must be installed within 2 metres of the exit sign.

The requirement of this extra emergency light is not only legally required but is critical to life safety. It enables occupants to see any obstacles obstructing an exit door and to safely open the door and to negotiate any change of direction of an exit path.

Under Work Health and Safety Regulations, non-compliance with emergency lighting requirements carries significant penalties in excess of \$1 million for corporations and possible imprisonment for individuals.

Sustainability

When correctly installed with the extra emergency luminaire, the installation of these Photoluminescent exit signs results in the **use of more power** and provides a **less sustainable solution**.*

*See the Independent audit WSP Consultants. Summary available on request from Lighting Council Australia

Maintenance

A photoluminescent exit sign is subject to the maintenance and inspection procedures in AS2293.2, which include simulating a power loss to each exit sign and then inspecting it to ensure it remains illuminated for 90 minutes.

Contact: David Crossley | Lighting Council Australia National Technical Officer | drossley@lightingcouncil.com.au

Exit and emergency lighting

- Lighting Council Australia has reported more than a dozen non-compliant buildings to local councils (Oct. 24 – Jan. 25).
- Stakeholders have poor knowledge.
- An education campaign has started.



Exit and emergency lighting

- Standards action underway.
 - Inspection and servicing standards for photoluminescent signs needed.



- The visibility of photoluminescent exit signs is also questionable...



HID phase out

HID phase out

- Commonwealth Gov't raised HID (mercury) phase out with LCA
- LCA responded:
 - Market size = 230,000
 - Market growth = -16% p.a.
 - Outdoor and industrial
 - No LED lamps above 250W.
 - LED luminaire replacement.
 - Standards changes trigger significant upgrades.
 - Budgetary planning needed => 2030.
 - Exemptions: UV



Non-compliant suppliers

Non-compliant suppliers

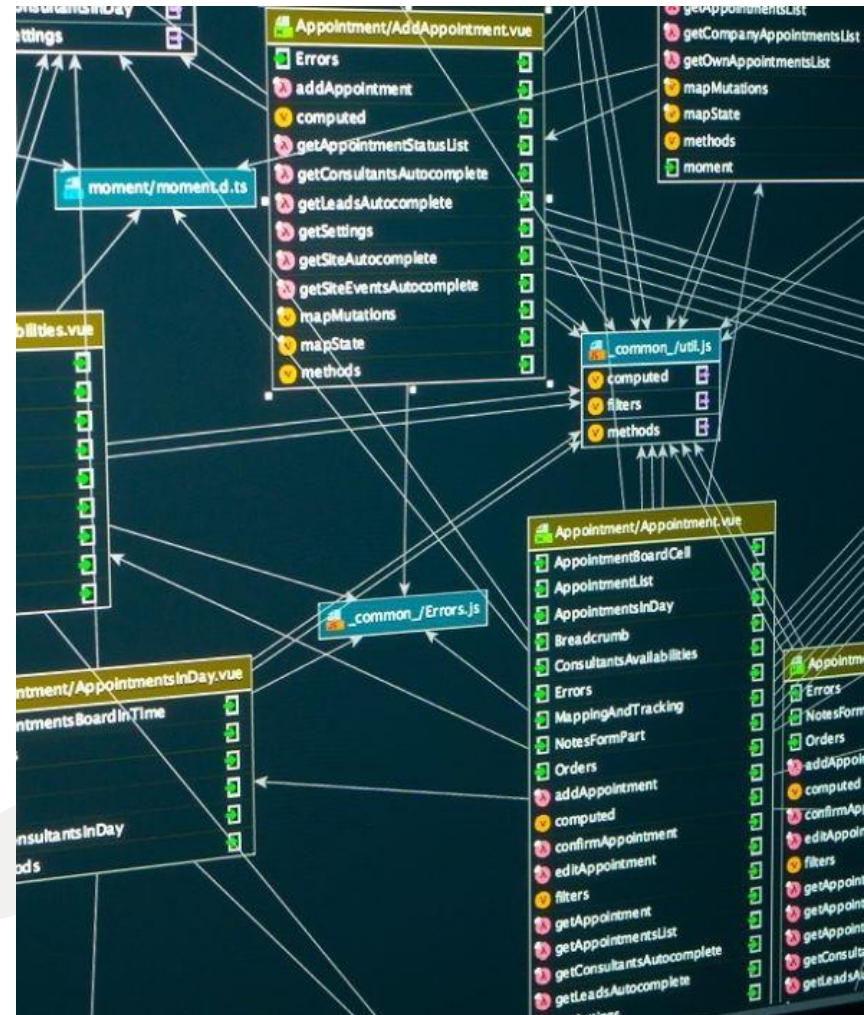
- Furniture importers moving into lighting unaware of regulations.
- LCA previously reported to regulators.
- LCA attempting direct education approach.
- Met with either silence or aggressive responses.
- Will discuss with regulators.



EESS database issues

EESS Database issues

- EESS has transitioned to a new database.
- LCA members are highlighting:
 - Long delays to refresh.
 - Unable to renew registrations.
 - Search failures for valid certificates
 - Can't renew supplier registration.
 - Traceability of registration numbers difficult
 - Login / logout problems
- Certifiers highlight a further long list of issues. Asking for:
 - Postponement of the 3 March deadline to update information.
 - New equipment safety rules.
 - Cost-benefit statement for the project.



New Zealand regulations

New Zealand regulation

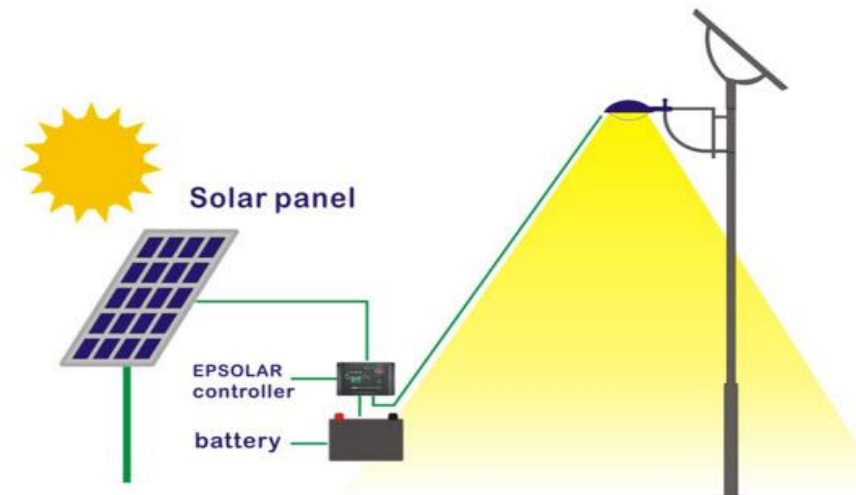
- In 2022 New Zealand issued gazette notices to recognise EESS certification and NSW certificates of approval - with added conditions.
- Stage two will revoke 2001 notices.
- NZ regulator recently announced they will delay stage 2 for the EESS database to be fully implemented.
- Also, following concerns raised by LCA and other industry associations, NZ is reconsidering the 'directorship' requirements.



Solar lighting technical specification

Solar Lighting Tech Spec

- Drafting of a solar lighting technical specification continues
- Contact David Crossley if you wish to assist drafting.



Contact

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