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E3 Lighting - Updated Policy Positions - September 2017

Lighting Council New Zealand (LCNZ) is the New Zealand industry association of lighting equipment manufacturers and importers, representing 28 New Zealand member companies. www.lightingcouncil.org.nz

This submission is the LCNZ response to the E3 policy positions *E3 Lighting: Update Policy Positions - September 2017* addressing LED lamp efficiency and performance in New Zealand.

A) Overview Comment and Recommendations

1. There is a decreasing need in NZ for regulatory intervention in LED market activities. The development of LED technology and economics has been advancing very appreciably in recent years and interventions of a mandatory nature aimed at expediting more efficient alternatives to sunset technologies are needed to a lesser extent than may have been the case in the past. LCNZ considers that product-based regulatory interventions (aside from product safety) should be eliminated or minimised, and that systemic application-based approaches (building standards and building codes) are key to achieving world-class lighting efficiency outcomes.

2. If LED lamps MEPS is to be implemented in NZ, LCNZ recommends that the number of LED lamp attributes to be monitored should be limited as far as practical in order to simplify implementation, performance verification and enforcement. The monitored parameters should be restricted to a range of absolutely essential attributes that will assist with the delivery of increased efficiencies and a positive user experience.

3. LCNZ recommends the removal of monitored attributes that are site application dependent.

4. LCNZ recommends that referenced product standards be aligned with international IEC and CIE standards to the maximum extent possible.

5. LCNZ recommends the removal of monitored attributes from the NZ E3 proposal that do not yet have a readily implementable international standard test method available.

6. To ensure a level playing field for industry LCNZ suggests that the enforcement of any NZ MEPS regulatory measures be a high priority for the relevant government agencies and that market surveillance and enforcement tasks are adequately resourced.

7. LCNZ commends EECA for its active role in facilitating the update of the NZ Standard for lighting application *NZS4243 Energy Efficiency- Large Buildings - Part 2 Lighting* and for its forthcoming updated citation in the NZ Building Code. This is an excellent example of how a collective approach with practical outcome-based measures can raise performance levels and deliver added-value long-term to NZ citizens and the economy at large.

B) E3 Policy Positions - General Questions

1. Are there any implementation barriers or possible unintended consequences of any of the policy positions or proposals under consideration?

Supply-chain implementation tasks added beyond the manadatory product safety and EMC tasks will result in additional costs that are ultimately passed on to the consumer.

LCNZ has strong concerns that if market suveillance and compliance enforcement is ineffectual this will create a distorted market landscape that incentivises errant suppliers offering non-compliant product.

Trans-Tasman harmonisation of requirements (particularly for product marking and packaging) is essential to minimise the very real and costly trade barriers that would otherwise exist.

The rapid pace of LED technology change is a barrier to MEPS implementation. Fast changing international product development cycles and NZ MEPS compliance administration lag-time may (in the short term) withold newer and more efficient products from local markets.

2. Is the analysis of the policy proposals considered reasonable, including data and assumptions used?

If a MEPS on LED lamps is to be implemented at all by NZ government, most of the proposals are in general reasonable, but not all of them (see analysis in Part C below).

The basis of some E3 policy positions is the International Energy Agency (IEA) 4E Solid State Lighting Annex, an agency that does not have universal endorsement from the international lighting industry. The reservations are based on the apparent minimal industry engagement and consultation and the perceived lack of consideration of the commercial realities of product development and supply-chain management.

The E3 team should take into account the comprehensive AU and NZ industry feedback from previous MEPS engagement rounds and also factor this into latest decision-making. The punitive effects of excessively broad scoped regulations and the resultant challenges of appropriate market surveillance and enforcement are very real.

3. Will the proposals have any adverse effects that have not been considered?

The likely adverse consequences of an inappropriately scoped intervention include, in summary:

- Additional and unnecessary costs for consumers
- Needless delays to the introduction of more efficient product into the market
- Unfair competition aided and abetted by difficulties in compliance enforcement
- Creation of new trade barriers
- Reduction in consumer choice

LCNZ suggest a cautionary approach to reduce the potential for unintended adverse consequences and suggests that any resultant NZ government intervention be tightly scoped and well-enforced.

C) Attachment J – Review and Comment

1. Scope

Greater precison is required with the scope and in particular the detail of the exclusions to MEPS. More extensive terms and definitions are required to reduce ambiguity.

Recommendations:
Add a full complement of terms and definitions.
Add graphic depictions of lamps.

2. Tuneable white LED

The tunable white colour region specified by the stated chromaticity coordinates is too broad and includes special purpose and saturated colour lamps.

Recommendation:
This white light scope definition should be narrowed to focus only on maintstream lamps for general residential and commercial lighting.
The proposed test method is complex and should be restricted to one CCT position (the worst case for energy use).

3. Low volume sales

Simplified registration for products with low volume sales is an area where compliance manipulation may occur. The reporting of sales figures for such items is fraught with issues and problems and is open to abuse.

Recommendation:
The low volume cutoff levels should be set at very low “sample quantities” only.

4. Scope Exclusions for LED Lamps

Greater precison is required with the detail of the exemptions to MEPS.

Recommendations:
Clarify the exact lamp exclusions.
Add graphic depictions of lamps that are excluded.

5. Terms and Definitions

More extensive terms and definitions is required to reduce ambiguity.

Recommendations:
Add a full complement of terms and definitions (as also noted above).

6. Product Families for Registration

The product family definition differs from that of IEC stanards which is likely to cause additional administrative complexity and testing cost.

Recommendation:
Adhere to IEC standards for family definitions.

D) Performance Requirements

Commentary and recommendations on Table 1 – Lamps.

1. Efficacy

Projecting to 2023 is too far ahead to make credible predictions.
Reduction percentages are required for tuneable white lamps and smart connected lamps.
The reduction application is not clear. The table states “cumulative”, the October 6 Sydney workshop discussion said “additive”.

Recommendation:
Delete 2023 efficacy limit (and review future limits closer to that date).
Add tuneable white lamps and smart connected lamp reductions.
Clarify the multiple reduction application process.

2. Light Distribution

Recommendation:
No change.

3. Centre beam luminous intensity

The purpose of this requirement is unclear.

Recommendation:
Delete or make optional.

4. Maximum high angle Luminance

This is an site application design outcome, not a product parameter. The acceptability or otherwise of a source luminance limit is a factor of the systemic application design which will vary for each application scenario.

Recommendation:
Delete.

5. Colour Rendering

Recommendation:
Accept.

6. Colour Appearance

Recommendation:
Accept.

7. Endurance

This parameter is part of the product commercial criteria about rated life and warranty.

Recommendation:
Delete endurance test, and replace with early failure tests.

8. Lumen maintenance

This parameter is part of the product commercial criteria about rated life and warranty.

Recommendation:
Delete.

9. Fundamental Power Factor

Recommendation:
Accept.

10.Harmonics

This parameter is not related to product performance or user experience. It is part of mandatory EMC requirements and is IEC/CISPR standardised and regulated in NZ by another government agency (MBIE Radio Spectrum Management).

Recommendation:
Delete.

11.Photo-biological Safety

This hazard is already covered by the newly updated product safety standard *AS/NZS 62560:2017 Section 17.2 Blue Light Hazard.* This has a normative requirement for compliance with RG0 and RG1.

Recommendation:
Delete.

12.Flicker

Is there evidence of a real and tangible problem with LED lamp flicker in NZ? It is not clear that there is an actual problem to address in NZ.

Recommendation:
Defer introduction of this requirement until there is a real and tangible problem in NZ that needs to be addressed for reasons of public safety (short term and long term health) and comfort. Deferring will also allow fit for purpose international standards to emerge that are relevant for NZ and AU.

13.Standby Power (for lamps with standby mode)

This is a relevant parameter to regulate. IEC TC-34 lighting technical committee is currently working on lamp and luminaire Standby Power terms and definitions, calculation methods, test methods and reporting methods.

Recommendation:
Defer introduction of this requirement until the IEC TC-34 Committee releases the lighting Standby Power IEC standard.

14.On-demand power consumption (for smart lamps)

This is a relevant parameter to regulate, however there is no international standard as yet for product energy use self-reporting by smart lamps. Standardisation of terms and definitions, calculation methods, test methods and reporting methods is required before MEPS regulation is feasible.

Recommendation:
Defer introduction of this requirement until the IEC releases the smart lamp/luminaire energy use self-reporting standard.

15.Rated Life Declaration

A minimum lifetime declaration (on packaging) is part of the product commercial criteria and warranty, not part of product performance requirements. This is proposed as a declaration only. There is no means of verifying the accuracy or otherwise of the claims. Such claims are not supported by evidential data and are open to manipulation.

Recommendation:
Delete rated life declaration as a mandatory item.
Add rated life declaration as a voluntary item.

16.ELV converter compatibility

This website requirement is too diffult to keep current and relevant. Retain as advisory only.

Recommendation:
Delete.

17.Dimmer compatibility

Recommendation:
Accept.

18.Replacement Lamp Equivalence

Recommendation:
Accept.

19.Proposed product and package marking requirements

LCNZ assessment and recommendations on product and package marking requirements.
Attributes:

- Lumens – Accept
- Efficacy –Delete for product. Accept for package/spec sheet (as per US and EU)
- Watts - Accept
- Lamp Equivalence - Accept
- Rated Lifetime - Delete
- CCT – Delete for product (as per IEC), Accept for package/spec sheet
- CRI - Accept
- Beam Angle - Accept
- Dimmable - Delete for product (as per IEC), Accept for package/spec sheet
- Dimmer compatibility - Accept
- ELVC converter compatibility - Delete
- Ballast compatibility - Accept
- Disposal information - Accept
- Standby energy use - Defer
- Photo biological safety - Delete
- Product identification - Accept

General Recommendations - All product and package marking requirements must be:

- Harmonised for both NZ and AU regulatory requirements (essential)
- Harmonised with IEC and EU requirements (desirable)

We hope that this submission from LCNZ is of assistance in determining practical, effective and economically efficient policy settings for New Zealand. LCNZ is keen to discuss and expand on details at any point.

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