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## **E3 Program: Consultation Regulation Impact Statement – Lighting November 2016**

### **Consultation Response from Lighting Council New Zealand**

Lighting Council New Zealand (LCNZ) is the New Zealand industry association of lighting equipment manufacturers and importers, representing 26 New Zealand member companies. [www.lightingcouncil.org.nz](http://www.lightingcouncil.org.nz)

This submission contains LCNZ suggestions and recommendations on the E3 Consultation Regulation Impact Statement – Lighting, November 2016.

LCNZ considers that there is a decreasing need for lighting MEPS regulatory intervention generally, and specifically for LED market activities. The uptake of LED technology has been naturally advancing at an appreciable rate in recent years and legislative interventions to ensure more efficient alternatives to sunset technologies are not required.

Products with poor light quality attributes entering the market could cause LED market spoilage but LCNZ considers that this issue is best addressed by appropriate enforcement of the electrical safety and EMC compliance (SDoC) scheme, a process that also helps to remove products with poor performance attributes.

Further, LCNZ considers it anomalous that a complex and potentially costly LED MEPS intervention is being considered with the goal of saving energy, when very poorly performing incandescent lamps are still available for sale in the NZ lighting market. LCNZ supports moves to remove incandescent lamps from the NZ market via a MEPS legislative intervention similar that prevailing in Australia for the last seven years.

**LCNZ supports the introduction of incandescent lamp MEPS for NZ to align with Australian MEPS legislation.**

**LCNZ does not support the introduction of MEPS for LED when incandescent lamps are not subject to MEPS legislation in NZ.**

**LCNZ does not support MEPS for commercial luminaires when the lighting design energy performance standard NZS4243:Part 2:2007 is outdated and ineffectual, and building code energy limits for commercial and industrial buildings are ineffectual.**

**LCNZ supports moves to provide training and education on LED lighting application along with smart controls and updated design methods**

If a LED MEPS for NZ is to proceed:

- a) LCNZ recommends that the number of product attributes to be monitored should be limited as far as practical in order to simplify implementation, performance verification and enforcement.
- b) LCNZ recommends the removal of attributes for commercial and industrial luminaires that are application dependent and are otherwise subject to AS/NZS lighting design standards for lighting scheme design and/or NZS or NZ Building Code limits for systemic energy performance.
- c) LCNZ recommends the removal of the 6000 hour attribute for maintained values for lumen depreciation.
- d) LCNZ recommends the removal of monitored attributes that do not yet have internationally standardised (ie IEC/ISO/CIE) test methods available.
- e) LCNZ recommends that referenced product standards be aligned with international IEC/ISO/CIE standards to the maximum extent possible.
- f) LCNZ recommends that the enforcement of MEPS regulatory measures be a high priority for the relevant government agencies and that enforcement tasks are adequately resourced and prioritised.
- g) LCNZ recommends that consideration be given to the product conformity declaration mechanism be merged with the current product electrical safety and EMC compliance SDoC process. This would provide for suppliers and consumers with a singular and integrated conformity and reporting mechanism that covers safety, energy and EMC compliance.

Regardless of the implementation of LED MEPs or not, LCNZ recommend that energy performance enforcement by technical regulators be supplemented by enforcement by commercial regulators. Commerce Commission enforcement of the Fair Trading Act

disciplinary measures regarding unsubstantiated advertising claims in respect of energy performance is required. This is a commonly seen problem that tends to erode market credibility for prudently conservative suppliers of energy using products. The Commerce Commission has not shown an appetite to investigate well-researched complaints regarding misleading advertising claims about product efficacy and/or energy efficiency.

The following Appendix 2 responds to the questions in the RIS.

We hope this information is useful and will be considered in future policy implementation. LCNZ is available for discussion at any point.

Yours faithfully



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## **Appendix 1: LCNZ Comment on Commercial Luminaires**

Should an LED MEPS be implemented the LCNZ recommendation is that MEPS for luminaires be confined to luminaires used for residential application only. Specifically, LCNZ does not support LED luminaire MEPS when the required commercial lighting application energy performance standard is obsolete.

Energy performance requirements for commercial and industrial building applications should be lighting systems based and be implemented by appropriate enforcement of mandatory building code energy use limits based on a suitably updated *NZS 4243:Energy Efficiency Large Buildings- Part 2:Lighting* design standard.

Applying product efficacy requirements/limits for “designed applications” such as commercial and industrial lighting installations is no longer international best practice. An efficacy limit (lm/W) for commercial and industrial luminaires may not be effective as high efficacy luminaires can be used in inappropriate ways and in such cases can deliver an overall result with poor systemic energy performance.

It is more appropriate from both a practical and regulatory standpoint (via design standards and building codes) to introduce application specific energy requirements for lighting systems using the metric of kWh/m<sup>2</sup>/yr with calculated outcomes for specific large building projects.

This is the European (commercial and industrial) interior lighting metric, the Lighting Energy

Numeric Indicator (LENI). This is defined in the European (CEN) standard *EN 15193: 2007 Energy performance of buildings — Energy requirements for lighting* which specifies the calculation methodology for lighting system energy performance.

This approach will help to incentivise the use of smart lighting dimming controls as it will provide the descriptors, metrics, calculation methods and reporting methods to quantify and communicate the resultant energy performance from the application of smart switching and variable light levels (dimming and brightening) available with modern LED luminaires and smart control systems.

LCNZ recommends consideration of the principles of *EN 15193: 2007 Energy performance of buildings — Energy requirements for lighting*. Such an approach is consistent with forthcoming European Commission Ecodesign regulations. EPBD (Energy Performance of Buildings Directive).

## **Appendix 2 : LCNZ responses to the E3 RIS Consultation Questions**

1. We have estimated that 10,200 lamp and LED luminaire product types would be covered by the proposed LED MEPS over a 10year period. Do you agree with this product estimate, noting the LED product scope, exemptions and proposed definition of family of models in Attachment H? If not please provide a revised estimate with supporting evidence.

**LCNZ does not support the introduction of MEPS for LED when incandescent lamps are not subject to MEPS legislation in NZ**

2. We have estimated that 600 traditional commercial luminaires, being supplied by 40 entities, would be covered by the proposed Commercial Luminaire MEPS. Do you agree with this supplier and product estimate, referencing the proposed definition of family of models in Attachment H? If not please provide a revised estimate with supporting evidence.

**LCNZ does not support the introduction of MEPS for LED when incandescent lamps are not subject to MEPS legislation in NZ**

3. We assume that the price of LED lamps and small LED luminaires won't increase, and there will only be a small short term price increase for larger LED luminaires, as a result of proposed changes to regulation. Do you agree with this assumption? If not why not? Please explain.

**Agree**

4. We assume that the price of traditional commercial luminaires won't change significantly from proposed changes to regulation. Do you agree with this assumption? If not why not? Please explain.

**Agree**

5. What, if any, unintended outcomes might arise from implementing the policy options? Please explain and give examples if possible.

**There are likely to be many unintended outcomes. The main impact is likely to be high levels of free riders due to inadequate conformity enforcement by regulators. High compliance costs and and slowing of supply chain flow are other consequences.**

6. What might help you easily comply with the proposed regulations? Do you have any suggestions to simplify or streamline the registration process?

**LCNZ does not support the introduction of MEPS for LED when incandescent lamps are not subject to MEPS legislation in NZ. If a MEPS was implemented then the complexity of the proposed approach would need to be greatly simplified by reducing scope and focusing on tangible technical parameters defined by international standards.**

7. If approved, the regulation for LED and Commercial Luminaire MEPS is planned to commence in January 2018, with the determination and test standard to be published six months prior. Noting that existing stock will still be able to be sold after that date, do you consider that this timing is sufficient to allow time for industry to implement this change?

**This is not sufficient time. There are many testing, administrative and registration tasks to undertake. The lead time from determination to implementation needs to be a minimum of 12 months.**

8. If approved, the regulation to increase MEPS for incandescent lamps, is planned to commence in November 2018, conditional on the introduction of LED MEPS (allowing time to address LED quality issues) and the replacement Incandescent MEPS determination being released six months prior, to allow time for industry to alter supply chains and minimise wastage of materials that are no longer needed. Noting that existing stock will still be able to be sold after that date, do you consider that this timing is sufficient to allow time for industry to implement this change?

**LCNZ does not support the introduction of MEPS for LED when incandescent lamps are not subject to MEPS legislation in NZ. LCNZ supports the introduction of incandescent lamp MEPS for NZ to align with Australian legislation.**

9. If you consider that timing of proposed regulatory change is inadequate, can you give us details on alternative ways and means that you could comply with regulations.

**Not Applicable**

## **LED MEPS**

10. Do you consider that the proposed MEPS efficacy level for 2018 is appropriate? If not please explain your rationale with suggested alternative. The proposed level is based on the 2016 IEA4ESSL recommended level (present), noting that suppliers will be required to test at least 10 lamp products (or 4 small, 2 large luminaires) to demonstrate that the mean of the sample of their model meets the minimum efficacy level.

**There is a disparity between the efficacy levels of lamps and luminaires. The lamp efficacy figure appears suitable but the luminaire efficacy figure requires reduction to compensate for luminaire internal losses due in Light Output Ratio (LOR) effects.**

11. Do you agree with the proposed mandatory minimum performance standards, outlined in Attachment H? If not, please advise of alternative approach with supporting rationale.

**Do not agree. LCNZ does not support the introduction of MEPS for LED when incandescent lamps are not subject to MEPS legislation in NZ. The complexity and cost is not appropriate (compared to the benefits) for NZ when incandescent is still allowed**

12. Do you agree with the proposed test methods, outlined in Attachment H? If not please advise of alternative approach with supporting rationale.

**Only agree in cases where test methods are based on international IEC/CIE/ISO standards**

13. Do you agree with the proposed staging of implementation by product category? If not, please advise of alternative approach with supporting rationale.

**Agree that staging would be a necessary requirement if implementation is to proceed.**

**LCNZ does not support the introduction of MEPS for LED when incandescent lamps are not subject to MEPS legislation in NZ.**

14. Do you agree with the proposed definition of family of models outlined in Attachment H? If not, please advise of alternative approach with supporting rationale.

**Do not agree. These need to be limited in order to reduce compliance burdens. LCNZ does not offer alternatives as it does not support the introduction of MEPS for LED when incandescent lamps are not subject to MEPS legislation in NZ.**

15. Do you agree with the proposed mandatory marking requirements outlined in Attachment H? If not, please advise of alternative approach with supporting rationale.

**Do not agree. This is likely to costly and burdensome for the supply chain. LCNZ does not offer alternatives as it does not support the introduction of MEPS for LED when incandescent lamps are not subject to MEPS legislation in NZ.**

16. Please provide indicative costs to implement proposed marking requirements.

**Do not agree that this is productive**

17. Please provide indicative costs to implement proposed marking requirements in a standardised format (i.e. consistent mandatory labelling).

**Do not agree that this is productive**

18. Do you support consistent mandatory labelling on LED packaging, to make it easier for consumers to compare key characteristics of LED products?

**Do not agree that this is productive**

19. Please provide an estimate on the cost imposed on suppliers to undertake proposed LED testing.

**LCNZ does not offer estimates as it does not support the introduction of MEPS for LED when incandescent lamps are not subject to MEPS legislation in NZ.**

### **Commercial luminaire MEPS (Note - RIS numbering sequence is erratic)**

10. Do you identify any concerns with the proposed LOR test approach?

**Limit scope and broaden family definition to reduce compliance costs.**

11. Do you agree that the testing proposed would result in little to no additional testing for suppliers who are already conducting testing for linear lamp registrations?

**This should be the case.**

12. Do you agree that non-integrated commercial luminaires will remain in the market in Australia and New Zealand as products are installed in some new or renovated commercial and industrial buildings over the next five years? Please provide estimates of the future market share of these products.

**Agree, but only for the short term.**

13. Do you agree that MEPS on commercial luminaires is warranted if MEPS is introduced for LED luminaires, to prevent the regulatory imbalance described above? If not, please explain your rationale.

**LCNZ does not support the introduction of MEPS for LED when incandescent lamps are not subject to MEPS legislation in NZ. Further, LCNZ does not support MEPS on commercial luminaires when the lighting design energy standard NZS4243:Part 2:2007 is outdated and ineffectual and building code energy requirements for commercial and industrial buildings are ineffectual. LCNZ supports the use of standards based systemic energy metrics such as those used in *EN 15193: 2007 Energy performance of buildings — Energy requirements for lighting*.**

14. Are there any gaps or issues with the proposed scope definition for commercial luminaires to be subject to MEPS?

**Not applicable.**

15. Do you consider that the proposed MEPS level is appropriate to achieve energy savings at the cheap end of the commercial market?

**Do not agree. It is hard to see substantive energy savings being achieved in NZ when the prevailing energy design standards and building code requirement are obsolete (the 12/Wm<sup>2</sup> energy density limit for offices is outdated).**

16. As a supplier, do you consider that MEPS on commercial luminaires would have a minor, moderate or major impact on your business? What, if any, concerns do you have with this option? Please provide estimates of any reduction in overall sales – where you are currently selling commercial luminaires that will be below the proposed MEPS.

**LCNZ has fundamental concerns. Introducing MEPS for commercial luminaires in NZ is a flawed concept when the standards based application energy requirements and building code requirements are so non-demanding. It is hard to see substantive energy savings being achieved in NZ when the prevailing energy design standards and building code requirements are obsolete. Updates are required to commercial lighting standards and BC requirements, before any commercial luminaire MEPS is considered.**

17. Is there any significant product categories that may be removed from the market as a result of the proposed MEPS levels?

**Not applicable**

18. With the removal of the poorest performing luminaires, do you agree that there are adequate replacement products at a relatively similar price, resulting in a minor impact on the end user consumer?

**Agree**

19. Limited data is available to assess the impact of the proposed MEPS on price. Modelling has assumed a 0.5 per cent increase in price with a 1 per cent increase in efficacy relationship. Is this assumption broadly reasonable? If not, please advise of alternative with supporting rationale. The E3 Program would welcome price data on commercial luminaires sold with associated efficacy to substantiate the accuracy of modelling (to be held in-confidence).

**Not applicable. Updates are required to commercial lighting standards and BC requirements, before any commercial luminaire MEPS is considered**

## **Mandatory labelling – all lighting technologies**

29. Please provide indicative costs to implement proposed label requirements.

**LCNZ does not agree with proposal.**

30. Do you consider in the absence of the further phase-out of incandescent and halogen lamps, that mandatory labelling across remaining incandescent, halogen, CFL, LED lamp and small LED luminaire products primarily used in the residential sector would assist consumers in selecting a light bulb to meet their needs?

**LCNZ supports the introduction of incandescent lamp MEPS for NZ to align with Australian legislation.**

31. How long would industry require to implement proposed label requirements? Please provide rationale.

**LCNZ does not agree with proposal.**

32. Do you consider that an information label, similar to the US FTC, would be most suitable for the Australian market? If not, please provide alternative suggestion with supporting rationale.

**LCNZ does not agree with proposal.**

33. Do you consider that incandescent watt equivalency should be included as a mandatory attribute? Alternatively, should this attribute be voluntary, allowing suppliers to transition away from this equivalency as consumers become more informed about lumens?

**LCNZ considers that this attribute is useful, and should be voluntary.**

34. Do you agree with our assertion that implementing labelling independently in New Zealand would be difficult?

**Agree, this would be difficult.**

35. Do you consider that mandatory labelling will significantly increase the purchase of energy efficient light bulbs in Australia? If yes, please provide research to support your claims.

**For NZ, do not agree.**

36. Can you advise of existing electronic transformers installed that are not compatible with any LED MR16 lamps on the market and if possible estimated number of installs.

**LCNZ cannot advise.**



37. The Department requests further advice to confirm the assumption that sensors and timers sold post 2010 are generally three wire.

**LCNZ cannot advise.**

38. Please advise if you consider if there are moisture ingress concerns with LED under certain conditions, including data/evidence to support your claims.

**LCNZ cannot advise.**

39. Please advise of any conditions (heat/moisture/other) where LED would not be a suitable replacement with data to support claims.

**LCNZ cannot advise.**

40. Is the exception for traffic lights necessary or are LED now considered superior under these conditions and thus the exception is no longer necessary?

**LCNZ cannot advise.**

41. Do you have any concerns with the proposed timetable to phase out halogen lamps? Are there any halogen type lamps on the market where there is no LED suitable replacement?

**LCNZ cannot advise LCNZ supports the introduction of incandescent/halogen lamp MEPS for NZ to align with Australian legislation.**

42. Are there additional costs to industry or consumers that need to be considered with this option, not already specified in the Impacts section of this RIS?

**LCNZ cannot advise.**

43. Do you consider that the estimated costs of this option are realistic? Please explain with supporting data, if possible.

**LCNZ cannot advise.**

44. Please suggest options to assist households with incompatible legacy lighting systems to make the transition to LED lighting.

**All efforts invested in education and training would be appropriate. Emphasis on supply chain personnel and electrical contractors.**

### **Information and education campaign**

45. Do you think a broad education campaign would be beneficial to raise awareness of changes and assist in the transition?

**LCNZ would strongly support all efforts invested in education and training. Suggest that an emphasis on upskilling and training of supply chain personnel (at wholesale and retail levels) and electrical contractors should be a prime focus.**

46. Would your organisation like to be involved in the development of the communication strategy and rollout?

**Yes.**

47. Do you have any feedback/suggestions on how communications could be best

approached, drawing on any experience through the 'Change the Globe' campaign or New Zealand's Rightlight education campaign?

**The NZ EC/EECA Rightlight education and training campaign (2009-2011) was very useful. This encompassed residential, commercial, industrial and road lighting and provided structured analysis and clear and consistent messaging. This momentum has now been lost, and LCNZ would support moves to deliver a refreshed program with LED, smart controls and updated lighting design methods.**