

## Guiding Questions

You are invited to give us feedback on this Consultation RIS, and any matter referred to in it, or arising from previous consultation on the product profile, including whether your position has changed (and why). This will help us develop a robust and useful regime.

These questions are designed to enable us to better understand the impact of our market and modelling assumptions, analysis and impacts on industry, energy use, greenhouse gas emissions and trade implications. We would be grateful if you could provide us with any relevant data or evidence that you may have to support your submissions.

### Philips Lighting comments:

**NOTE: numbering of consultation questions is incorrect – to avoid confusion no changes are made!**

#### General

1. We have estimated that 10,200 lamp and LED luminaire product types would be covered by the proposed LED MEPS over a 10 year 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.
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.
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.
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.
5. What, if any, unintended outcomes might arise from implementing the policy options? Please explain and give examples if possible.
6. What might help you easily comply with the proposed regulations? Do you have any suggestions to simplify or streamline the registration process?
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?
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?
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.

#### 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.

## Philips Lighting comments:

Making a distinction between various lamp types (directional-non directional) and various luminaire types, opens an area of uncertainty for market surveillance (authorities) with potential debates on classification of products. Philips Lighting favors one Minimum Threshold level for all lighting products. This also anticipates on a future where the difference between a lamp and a luminaire will disappear.

Philips Lighting understand that the proposed test protocol (10 lamps and 4 small + 2 large luminaires) might be appropriate for market surveillance efforts but we are not happy with the suggested way to demonstrate compliance to the minimum efficacy level. The proposed 2016 IEA 4E SSL verification tests deviate from the method described in commonly used IEC standards. Philips Lighting prefers to stick to IEC methodology to determine lm/W.

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.

Not at all. Philips Lighting main concern is that we strongly believe that effective legislation requires a healthy balance in '*# of requirements*' and '*Monitoring, Verification and Enforcement (MVE) efforts*'. Since the proposed MVE efforts are limited to product registration without a proper verification of product performance against what is claimed, we think it is fair to reduce the 22 requirements proposed to an absolute minimum to regulate minimum energy performance.

Philips Lighting suggests the following set of requirements:

energy performance: 2 mandatory requirements (including unambiguous limits, no tiers)

- lm/W as defined in IEC standards
- standby power (W) as defined in IEC standards

functional performance: 6 mandatory information obligations (without limits)

- lumen output (lm) as defined in IEC standards
- power (W) as defined in IEC standards
- dimmability Y/N
- CCT + CRI (colour quality) as defined in CIE standards
- displacement Factor: as defined in IEC standards

In case the AU/NZ government decides to stick to the proposed mandatory MEPS as outlined in Annex H, please find our detailed comments in a separate file.

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

Philips Lighting always proposes to use so called 'state of the art' test and measurement protocols. Follow as much as possible international accepted IEC performance standards for the definition of requirements, test protocols and sample sizes. This will enable Philips Lighting to (re-)use existing test reports. Any deviation from IEC standards leads to additional testing and extra cost.

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

Philips Lighting proposes to use only two stages: 2018 and 2020 with a review in 2022. We learn that technology is still evolving and that it is very hard to predict what will be the situation in 6-8 years from now.

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.

The proposed family model definition deviates from the one used in current IEC standards. As a consequence Philips Lighting will face new 'families of models' to be tested before registration. This will lead to additional testing and extra cost.

Philips Lighting prefer to refer to international accepted IEC performance standards for family model definition. This will enable us to (re-)use existing test reports.

Philips Lighting sees a practical issue caused by the fast LED chip efficacy increase. In practice this results in similar flux levels against lower wattage. It is better to specify '90% minimum wattage' instead of a '10% flux tolerance' for family registration.

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

Philips Lighting agrees with the suggested marking requirements, as long as for the definition of requirements, test protocols and sample sizes reference is made to international accepted IEC performance standards. This will enable Philips Lighting to (re-)use existing test reports. Any deviation from IEC standards leads to additional testing and extra cost.

Philips Lighting does not agree with the suggestion of fixed luminous flux levels (see Annex H - table 3 where 'preferably' is crossed out) as regional standards require different and specific lumen values (e.g. EU: 470lm~40W). Therefore marking requirements should not be prescriptive on lumen levels, this is Annex H - table 1.

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

Philips Lighting believes the proposed marking requirements (flux, power, CCT, beam angle and dimmability) are realistic and in line with what is specified in Europe. Main challenge will be the lamp marking because of size.

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

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

Philips Lighting in general prefers harmonized packaging across countries /regions. To avoid language specific versions the use of symbols is required. Philips Lighting supports labelling of consumer LED lamps and luminaires. Today professional (commercial) LED luminaires are shipped in industrial packaging and labelling requirements will require new packaging design and result into significant extra cost. Therefore Philips Lighting proposes to limit the scope of this MEPs document to luminaires used in residential buildings.

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

Philips Lighting is of the opinion that as long as the AU/NZ government sticks to international accepted IEC performance standards (when it comes to definition of requirements, test protocols and sample sizes) we are able to (re-)use existing test reports. This will significantly reduce our test efforts.

The proposed LED testing would be an additional cost to the manufacturer, Philips Lighting suggests to accept the "Declaration of Conformity "as given by the manufacturer

## Commercial luminaire MEPS

10. Do you identify any concerns with the proposed LOR test approach?  
For professional (commercial) luminaires Philips Lighting does not have concerns with the proposed LOR test approach. For luminaires used in the consumer market, LOR is not commonly used (no lighting designs!) and therefore the proposed LOR requirement will lead to additional testing and extra cost.
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?
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.
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.
14. Are there any gaps or issues with the proposed scope definition for commercial luminaires to be subject to MEPS?

Philips Lighting believes the proposed product category definitions are not clear e.g. What is large/small? Does everybody know planar, batten, troffers, recessed, suspended and surface? This causes confusion and requires further clarification.

Also the proposed scope definition is not clear:

a) The exercise is about LED MEPS for both lamps and luminaires. There is a split in MEPS for 'Integrated LED luminaires' (page 55) and 'Non-integrated commercial luminaires' (page 60) whereas Annex H only specifies 'Integrated LED luminaires MEPS' related criteria (table 2).

b) There seems a contradiction in Annex H scope + scope exclusions:

Scope: **Planar Luminaires, integrated battens & Troffers** (table 2)

- troffer/recessed luminaires (defined in AS/NZS 60598-2-2)

- batten/fix general purpose luminaires (defined in AS/NZS 60598-2-1)

Scope exclusion: **Integrated LED luminaires** (Small and Large) exclude:

- Planar Luminaires, integrated battens & Troffers (including those defined in AS/NZS 60598.2.1 and AS/NZS 60598.2.2:2002)

15. Do you consider that the proposed MEPS level is appropriate to achieve energy savings at the cheap end of the commercial market?
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.
17. Is there any significant product categories that may be removed from the market as a result of the proposed MEPS levels?
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?
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).

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

29. Please provide indicative costs to implement proposed label requirements.
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?
31. How long would industry require to implement proposed label requirements? Please provide rationale.
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.
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?
34. Do you agree with our assertion that implementing labelling independently in New Zealand 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.

### **Increase incandescent MEPS (Australia only) to remove the most inefficient lamps**

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.
37. The Department requests further advice to confirm the assumption that sensors and timers sold post 2010 are generally three wire.
38. Please advise if you consider if there are moisture ingress concerns with LED under certain conditions, including data/evidence to support your claims.
39. Please advise of any conditions (heat/moisture/other) where LED would not be a suitable replacement with data to support claims.
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?
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?
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?
43. Do you consider that the estimated costs of this option are realistic? Please explain with supporting data, if possible.
44. Please suggest options to assist households with incompatible legacy lighting systems to make the transition to LED lighting.

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