



2 March 2017

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Attention: To whom it may concern

Dear Recipient

Re: 'Consultation RIS – Lighting' - Lighting Consultation Regulation Impact Statement

Professional response from DavidBeckerDesign

We write in response to the Consultation Regulation Impact Statement (RIS) above.

As an individual and a lighting design professional, this author thoroughly endorses the ambition of saving energy. There are both commercial and moral imperatives as to why we should do everything in our power to develop more efficient uses of energy. Energy consumption is far too high. There is manifest energy waste that cannot endure without unacceptable risk, and so all possible efforts should be made to reduce greenhouse gas emission.

As Principal of David BeckerDesign I have been involved in lighting as a designer and specialist consultant for more than 20 years. During this time the work of my team has been focussed mainly on the commercial sector and comprises a portfolio spanning local and international government, civic and corporate projects.

As professional lighting designers we work within the guidelines and mandated references of illuminance, glare, uniformity and power density to deliver schemes that satisfy our clients' objectives to provide functional, comfortable, efficient and durable outcomes. The implications and impact of the RIS are therefore extremely important to us professionally.

We have a number of serious concerns about the RIS in the commercial realm. Before we outline our trepidations about the technical and practical application of the MEPS proposals, we firstly wish to note disappointment with the process.

We are concerned that the document has seemingly not sought the input of professional design specialists who apply lighting technology within the constraints of public policy through design. There has been no consultation with the leading association that represents the lighting design community globally, the International Association of Lighting Designers (IALD). Given the IALD is a global proponent of excellence in design and sustainability, this seems a poor oversight. As a result we do not believe that the proposals reflect the views and value of a significant part of the lighting industry, a part that is extremely influential in minimising energy consumption through excellence in application.

We are also concerned that this extremely long and complex document (206 pages) has not been given adequate time for public consideration and discussion. Issued as recently as November and with relatively little announcement, the duration for feedback originally closed in February.

Within this small window there were the distractions of seasonal festivities, several public holidays and the summer break, which might reasonably exclude 4 weeks from the already short evaluation period. Considering the reach and associated impact on people's livelihoods and human experience, we wonder how this public review process was considered reasonable by the government agency.

Our concerns on the technical content are summarised as follows.

In its current form we believe large parts of the RIS are unworkable for many commercial, corporate and civic applications. We believe it will be severely detrimental to the lit environment and people's health, and will adversely affect the viability of many lighting distributors without delivering any energy saving. We believe there are much better ways to create energy savings.

The RIS represents yet more layers of complication and onerous administration to the energy efficiency systems that are already in place. The government already has a very effective and mandatory method of controlling lighting power density in the commercial sector through Section J6 of the Building and Construction Code (BCC). Section J6 is well understood and provides a range of energy constraints depending on industry and application.

In addition the commercial sector has other more stringent measures in Green Star and NABERS ratings that demonstrate enhanced concern for the environment.

We are very encouraged that government wants to curtail energy usage, but we believe it would be more efficient and manageable to tweak existing stipulations rather than apply another layer of conditions. Given government's repeated mantra of cutting red tape, the draft proposals in the RIS seem to be a contradiction.

We believe that Section J6 of the BCC already provides excellent architecture for lighting energy efficiency for commercial developments. In transitioning from a mix of incandescent and HID sources to LED products, the majority of energy that can be saved has already been achieved within current legislation. Professional clients and commercial lighting designers work to these stipulations at the same time as satisfying the gamut of applications and outcomes required in today's world.

If further energy savings are required (and we think that would be desirable), then government could simply adjust the power densities in Section J6, and review Basix. To go further, government could review illumination Standards and consider lowering illuminance recommendations. Any of these would provide instant reduction in energy use on all new installations, and be relatively straight forward to apply.

Government could also look at ways to reduce energy waste by encouraging people to turn lights off. There are numerous examples of supposedly energy efficient buildings that are ablaze at night. Nothing saves energy like something turned off.

We believe that the proposal of MEPS for LED lamps has some merit as these are generally retrofit products to replace tungsten halogen MR16 lamps. The implementation of MEPS on LED lamps could have energy saving benefits principally in the domestic market so long as there is an adjustment for colour temperature and colour rendering, as efficacy favours low colour rendering, high colour temperature LEDs.

However in current form the proposal for MEPS for integrated LED luminaires is fundamentally flawed and unworkable. This would affect a huge part of the lighting industry.

The proposal is either unaware of, or ignores a huge inventory of product that is vital to the illumination of a wide range of commercial and civic environments. As proposed, the majority of optically controlled integrated luminaires will fail to meet the MEPS. The draft doesn't acknowledge that many luminaires are designed to perform specific illumination tasks. These optically precise fittings are designed to meet certain criteria as efficiently as possible. However, against the stated MEPS measures in the RIS they would not be approved.

As an example wall washers are the staple product of art galleries around the world but would be banned under the draft proposal. A fundamental law in lighting design is that vertical illumination is more valuable to "apparent brightness" than light on a floor plane. Wall washers enable vertical surfaces to be uniformly illuminated, thus creating the illusion of brightness. So whilst wall washers have a light output ration (LOR) that falls below the draft proposals, they are able to light a space to comfortable levels at lower energy usage than would be achieved by other means because of their optical performance.

As a consequence lighting designers would be unable to meet the functional, operational and aesthetic needs of clients in many applications. The proposal would mean that crude, glary lights with poor colour rendering and blue white colour temperature would prevail. It would enhance the low quality end of the market at the expense of high quality lighting. This runs counter to moves elsewhere in the world where "Wellness" is an evolving criteria for the lit environment. Any measures that promote low quality light is not acceptable and would not meet the diverse illumination requirements that exist.

Australia's lighting manufacturing industry is focussed towards to budget and basic end of the market, augmented with some specialist custom and decorative work. It is largely an importer of quality luminaires. These quality products for specific performance tasks are largely imported from Europe. If the MEPS for integrated LED luminaires were to be implemented, suppliers of these quality fittings would suddenly find that they could no longer sell products that meet the new approval standard, and their businesses would therefore be ruined.

Irrespective of technical compliance with MEPS, we are concerned that if applied to integrated luminaires the approval process would prove to be unmanageable and a prohibitive cost. Even if quality fittings were to comply, given each luminaire might have tens of variants, then the cost of submitting would be incredible. Even if approvals related to "families" of products, given the extent of what is on offer, this would still be unmanageable and an excessive cost.

The services of lighting designers are sought particularly where illumination innovation is required, and client's needs are complex. To meet professional briefs it is therefore a frequent exercise to investigate unusual luminaires which have special performance or aesthetic value. In such cases the supplier imports very small quantities on a project by project basis. If the MEPS were to be mandated, the specification of innovative and specific performance based integrated luminaires would cease. In this event we have no idea how project needs would be met.

Given that project deadlines are usually brutally tight, we have grave doubts not only about the additional cost of MEPS approval, but the delay which may jeopardise the project delivery.

As stated above, we are concerned that there is no compensation in the proposal for excellent colour rendering or lower colour temperature, which means that poor colour performance and high colour temperature light would become the norm, as the proposed approval would favour these characteristics. These attributes should be discouraged rather than promoted.

In regard to the labelling proposal, this would serve no practical purpose to the commercial lighting sector where the lighting specifier rarely witnesses the packaging – product is selected by



the lighting professional from technical information such as photometric data, and orders are placed on the supplier by a wholesaler on behalf of the successful electrical contractor. At no time would a label provide any value or purpose in this process. To create new labelling requirements that will require all overseas products to comply with a uniquely Australian protocol would be ineffective and impractical, and would serve only to add cost and delay to delivery. It would have no effect on the reduction of energy consumption.

We believe that the RIS does not represent the whole lighting market. Whilst some of its proposals may benefit products retailed in shops and help further reduce energy in the retrofit LED market, for the majority of the professional lighting environment the RIS proposal represents very serious problems that would fail to achieve the energy savings intended. It would create a lot of damaging noise in business and unnecessary complexity, at the same time causing degradation to illumination quality and financial distress for distributors of quality luminaires.

We would welcome a more inclusive approach to developing this document, and believe that a senior figure from the International Association of Lighting Designers should advise in the development process.

Government can be assured that we are entirely supportive of its ambition to save energy.

David Becker

Principal