Department for
Business, Energy
& Industrial Strategy

Ecodesign and Energy Labelling for lighting products: Government Response

A response to a consultation on proposed ecodesign and energy labelling regulations for lighting products in 2021; and further evidence-gathering to support the development of better lighting products policy beyond 2021.

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Executive Summary

The Government published a consultation in November 2020 on proposed Regulations to implement new ecodesign and energy labelling requirements for light sources and separate control gears ("lighting products"). The requirements in these draft Regulations reflected what the UK agreed at EU-level in December 2018. The consultation sought views on the proposed Regulations, the associated impact assessments, and the timetable for implementing these Regulations.

The new ecodesign requirements include measures to raise the minimum energy efficiency requirements for lighting products which will see some less efficient lamp types phased out. They also proposed to introduce requirements to facilitate the removal of light sources and control gears from containing products and to improve the definitions to clarify which lamp types are in scope and which are exempted. The regulations will also rescale energy labels and reintroduce a homogenous A to G scale to allow consumers to better discern the most energy efficient products.

The responses to this consultation were strongly in support of the Government's proposal to implement these new ecodesign and energy labelling requirements for lighting products in Great Britain (GB). Therefore, we intend to lay the draft Regulations in Summer 2021 with the aim of bringing the new measures into force from 1st September 2021, subject to Parliamentary time.

After feedback from stakeholders, we also plan to reflect the amendments made by the European Commission's amendment procedure to their equivalent regulations[1] into our domestic legislation when we implement these new requirements. These amendments 'fix' a range of technical issues to ensure the measures can be implemented effectively. Although these amendments were not part of the draft Regulations we consulted on, we intend to adopt them based on stakeholder feedback received during the consultation.

In implementing these Regulations, we will ensure that GB maintains high product standards which benefit the environment and contribute to greater energy, carbon and bill savings. These benefits will help us on our way towards the UK's Carbon Budget and Net Zero targets. As a result of these Regulations, we estimate around **10.6 TWh of energy savings by 2050** across all sectors, resulting in around **1.26 MtCO2 of carbon savings** over the same period.

The consultation also included a number of questions designed to delve deeper into how better ecodesign and energy labelling regulations for lighting products could be set beyond 2021. These questions were designed to build on and supplement the feedback we received to the questions relating to lighting products in our recent Call for Evidence for Energy-related Products[2].

[1] Regulation (EU) 2019/2020 regarding Ecodesign requirements for light sources and separate control gears, and Delegated Regulation (EU) 2019/2015 regarding energy labelling of light sources.
[2] Energy-Related Products: Call for Evidence. Available at: https://www.gov.uk/government/consultations/energy-related-products-call-for-evidence

Together, this body of evidence will be used to inform UK policies for lighting products to achieve greater carbon, energy, resource, and bills savings. This includes supporting the commitment to publish a world class energy-related products policy framework in 2021 as set out in the Prime Minister's Ten Point Plan for a Green Recovery.

Contents

Introduction

Policy Context

Energy-related products are goods, such as washing machines, lighting products and televisions, which have an impact on energy consumption when in use or in standby mode. They are currently regulated under two policies in the UK:

• Ecodesign

• Energy labelling

These policies aim to reduce carbon emissions; lower consumer energy bills; and encourage innovation in products to be more energy and resource efficient. In 2021 alone, it is estimated that these policies will save 8 MtCO2e and £75 on annual energy bills for the average dual-fuel household in the UK.[3] These savings are important as energy-related products account for approximately 55% of total (non-transport) energy use in the UK with lighting products, alongside gas boilers, electric motors and water pumps, accounting for a substantial proportion of this. Ecodesign and energy labelling policies will therefore play a significant role in the UK's transition to a low-carbon society.

Ecodesign aims to phase out the least efficient energy-related products from the market through minimum energy performance standards (MEPS). Ecodesign requirements can also facilitate progress towards a more circular economy through setting requirements with regards to resource efficiency. This includes material consumption, emissions, pollution and waste generation, durability, repairability, recyclability and ease of material recovery.

Energy labels provide information on the energy consumption (and other parameters such as water consumption) of products and show how much energy an appliance uses compared with other models. Energy labelling aims to drive the uptake of the most energy efficient products by providing consumers with information on the energy performance of products they are interested in buying at the point of sale.

Ecodesign and Energy Labelling Regulations for 2021

As an EU Member State, in Winter 2018/19, the UK voted in favour of new ecodesign and energy labelling requirements for a package of energy-related products. Our support for these requirements was informed at the time by our own cost-benefit analysis and engagement with UK interested parties. Some of these requirements took effect before the end of the Transition Period, so were retained on 1st January 2021. Requirements for seven of these product categories will be introduced in Great Britain in Summer 2021, following the result of a public

[3] BEIS estimates – savings in relation to having no products policy measures.

consultation[4]. EU ecodesign and energy labelling regulations will continue to apply in Northern Ireland in accordance with the Northern Ireland Protocol.

In November 2020, we issued a consultation on our proposal to implement the requirements for lighting products, which are due to come into force in the EU in September 2021[5]. As noted in the consultation document, domestic legislation is needed in order to give these requirements effect in Great Britain. The consultation proposals reflected the product-specific requirements that the UK voted for at EU-level in 2018/19 and were supported by a consultation-stage Impact Assessment which affirmed the benefits that these Regulations would achieve in Great Britain.

The consultation proposed Regulations to update ecodesign and energy labelling requirements for lighting products. The requirements will set higher minimum energy efficiency standards, introduce requirements to facilitate the removal of light sources and control gears from containing products, and 'rescale' existing energy labels so that consumers can better discern the most energy efficient products.

Respondents were asked whether they agree with the following:

- the proposed ecodesign and energy labelling Regulations;
- the timetable for implementing the Regulations;
- the timetable for reviewing the Regulations; and
- the assessment of the costs and benefits of the Regulations and the assessment of the impact of 'doing nothing'.

Better policy beyond 2021

The consultation also gathered evidence to support the development of better polices for lighting products in the UK beyond 2021. Whilst we are not proposing at this point in time to introduce different ecodesign and energy labelling requirements than those we agreed as an EU Member State, our analysis indicates that there remains significant potential for further carbon and bill savings to be achieved in the UK lighting sector, including (but not exclusively) by introducing better MEPS for lighting products in GB.

The consultation sought views on a potential policy scenario which would set better MEPS in 2023 and 2025; which we estimate could save a further 2.5 MtCO2e by 2050 and increase household energy bill savings by a further £1.4 billion[6]. The consultation also sought views on what other policy levers could make lighting products more energy and resource efficient.

Respondents were asked:

[4] Consultation on Draft Ecodesign and Energy Labelling Regulations for 2021. Available at: https://www.gov.uk/government/consultations/draft-ecodesign-and-energy-labelling-regulations-2021
[5] Regulation (EU) 2019/2020 regarding Ecodesign requirements for light sources and separate control gears, and Delegated Regulation (EU) 2019/2015 regarding energy labelling of light sources.
[6] BEIS calculation of average household saving multiplied by the ONS household projections. Available at: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/datasets/householdprojectionsforengland

- if MEPS could be raised for all light sources to 120 lumens/watt from 2023, and then to 140 lumens/watt from 2025;
- what the benefits of lighting controls are, and what Government could do to support their installation and management;
- how energy labels could be made more useful for lighting products;
- how resource efficiency measures could improve the environmental performance of lighting products; and
- what other policy levers could make lighting products policy more effective.

Outline of Respondents

We received 43 responses to this consultation. Of these, 26 were submitted online through Citizen Space and 17 via email. Among the respondents to the consultation were 20 members of the public, six trade associations, three professional bodies, three businesses, two retailers, three charities, two academics, one manufacturer, and four others. In addition to this we conducted two stakeholder meetings. The attendees of these meetings were product manufacturers, trade associations representing manufacturers and other groups representing UK industry.

We promoted the consultation across our stakeholder base, covering industry stakeholders, and environmental and consumer groups, to encourage the widest range of responses. We held two stakeholder meetings, one on the proposed 2021 requirements, and one on better policy beyond 2021. We focussed the first stakeholder meeting specifically on industry stakeholders to gather sufficient evidence in relation to the costs of implementing our proposals. This group incur the vast majority of costs of ecodesign and energy labelling policies so were able to offer particularly useful insights to support our implementation of the requirements in GB. The second stakeholder meeting was promoted to a wider range of stakeholders to allow for the broadest set of views to feed into building our evidence base. A full list of respondents can be found in Annex A.

Government Response

The consultation proposed Regulations to implement new ecodesign and energy labelling requirements for lighting products. It sought views on the proposed Regulations, the associated impact assessment, and the timetable for implementing the Regulations.

Proposed ecodesign and energy labelling Regulations

The evidence gathered by this consultation showed strong support for the proposals and, as a result, the Government intends to lay the draft Regulations in Parliament this Summer with the aim to implement the new ecodesign and energy labelling requirements for lighting products from 1st September 2021, subject to Parliamentary time.

The regulations will improve minimum energy efficiency requirements for lighting products, as well as introduce requirements to facilitate the removal of light sources and control gears from containing products. The regulations will also rescale energy labels and reintroduce a homogenous A to G scale so that consumers can better discern the most energy efficient products. These measures will apply in GB only and will be compatible with the technical specifications set out in the equivalent EU requirements.

The Government is aware that the equivalent EU regulations have undergone an amendment procedure to clarify and correct a range of technical issues. It is our intention to reflect these amendments in the draft GB Regulations, except in instances where these are not relevant to the GB context. Our intention is to incorporate these amendments into the draft Regulations before laying them in Parliament in 2021.

Several respondents to the consultation raised concerns about the potential health impacts of certain lighting technologies, specifically LEDs (Light Emitting Diodes). Public Health England (PHE) advise the Department for Business, Energy and Industrial Strategy (BEIS) on potential health implications of energy-related products policy and are satisfied that the updated requirements do not disproportionately impact those with protected characteristics. In addition, the Regulations place functional requirements on lighting products to limit certain potential adverse health effects and offer exemptions for lighting products specifically intended to be used by those who are photosensitive. BEIS will continue to work closely with Public Health England to understand and address these concerns.

Some stakeholders raised concerns that consumers could possibly be confused when faced with rescaled energy labels. The energy label for some energy-related products have already been rescaled from 1 March 2021. Ahead of and during this period, we ran a communications campaign to highlight these changes, working in collaboration with the Office for Product Safety and Standards (OPSS) and stakeholders, such as the Energy Saving Trust (EST). OPSS issued technical notices and e-alerts to make sure businesses were aware of the implementation date. We updated the information on gov.uk and responded to email queries from businesses. We also supported EST in their Label2020 website, which provides information and support for manufacturers, retailers and consumers. Social media also played

a role in our communication plan. We plan to carry out the same activities for the September rescaling, both ahead of September 2021 and up until October 2021.

Timetable for reviewing the Regulations

The Regulations for lighting products will be reviewed by no later than a period of five years from the date they begin to apply. The Government is not prevented from reviewing the Regulations earlier than this if there is evidence to suggest it would be beneficial. The review date takes into consideration the rate of technological progress for lighting products and also allows for provisions to be implemented and market penetration to be well-understood by the time of the review.

Assessment of costs and benefits of the Regulations

Efforts were made to find small and micro businesses to participate in the consultation, although they make up a small proportion of the market. While not received directly from small businesses, we did receive helpful feedback from stakeholders in relation to the impact of the proposals on small and micro businesses. Along with evidence from other sources, this feedback will inform the assumptions underpinning our final-stage Impact Assessments for the Regulations. Based on this, we have decided that no transitional period is required specifically for small businesses to help them comply with the new requirements. Nevertheless, we are required to provide a transitional period for all businesses before all products placed on the market must comply with the new ecodesign requirements. Our proposed implementation date is 1st September 2021, and a transitional period will be implemented until 1st October 2021, to allow manufacturers to prepare for the new ecodesign requirements and ensure compliance.

Stakeholders raised a concern about additional costs being incurred by companies as a result of having to study both the GB and EU Regulations in order to familiarise themselves with the requirements - despite the technical requirements being the same – particularly if the drafting style is different. We acknowledge that businesses will incur a transitional cost when we implement the GB Regulations. It is important the GB Regulations are adapted to the style of the UK Statute Book and seek to simplify the complexity of the requirements as far as is reasonable. Our aim is to ensure the legislation is as clear as possible to minimise these costs for businesses and to ensure the requirements are well understood to support compliance. The analysis of costs in the Impact Assessment has taken these specific transition costs into account.

‘Additionality’ is the extent to which something happens as a result of an intervention that would not have occurred in the absence of the intervention. In response to feedback which suggested that the majority of manufacturers would comply with the requirements in the absence of any GB Regulations, we have reduced our ‘additionality assumption’ from our previously assumed 50% to 25% in the final stage Impact Assessment. This means that a smaller proportion of the benefits will be realised as a direct result of implementing GB-specific Regulations. This is because feedback suggested the majority of lighting products supplied to the GB market will comply with the EU’s requirements, even in the absence of GB regulation. Nevertheless, the UK Government is committed to maintaining high product standards and

wants to prevent inefficient products being placed on the GB market. Even with this change, regulation remains the best option for this product in GB as this will facilitate them becoming more energy and resource-efficient.

Better policy beyond 2021

We also used the consultation to seek views on ways in which better ecodesign and energy labelling regulations for lighting products could be set beyond 2021. The feedback provided by stakeholders to this section will supplement the evidence gathered by our recent Call for Evidence and, alongside the UK Energy-related Products Policy Study will shape our future policy framework. Our aim is to develop and publish our world class products policy framework later this year. This was recently announced as part of the Prime Minister's ten-point plan for a green industrial revolution. Any proposed future interventions will consider the impact on business, consumer bills and carbon savings to ensure that the regulations deliver a net benefit to the UK and do not place unnecessary burdens on businesses.

Lighting Products

In this consultation, questions 1 to 15 asked respondents for their views on the new ecodesign and energy labelling requirements in the draft Regulations, their proposed implementation and review dates, and the impacts of introducing or not introducing these requirements on UK-based SMEs and businesses.

Question 1

Q.1 Do you agree with our intention to introduce the new ecodesign requirements for lighting products in GB, as set out in the draft Regulations (reflecting what the UK agreed at EU level as a Member State in December 2018)? Yes/No

If you do not agree, please provide reasons supported by evidence where possible.

We received 31 responses from a range of stakeholders including manufacturers, retailers, businesses, professional bodies, trade associations, charities, academics, members of the public and others. Of these, the majority agreed with the intention to introduce new requirements. **20 responded yes, 11 responded no.**

The responses generally fell into two themes. Industry and trade associations were supportive of adopting the new requirements and also stressed their preference that we adopt the amendments made at EU level to their equivalent regulations, while some businesses said they would need more support to comply with the requirements.

Six stakeholders from trade associations, businesses and a charity said the requirements should also include amendments made by the EU to their equivalent lighting products regulations. Three stakeholders from the entertainment industry said not adopting the EU amendments from the EU omnibus would increase costs for businesses.

A small number of respondents were concerned about businesses being ready to implement the changes. One stakeholder felt there should be a transitional period to allow manufacturers and dealers longer to prepare. The draft Regulations do allow for a transitional period for ecodesign requirements up until 1st October 2021.

Whilst twenty stakeholders agreed with our proposals, a small minority raised concerns about potential health issues arising from photosensitivity to LED lighting. Concerns ranged from the possible effects of excessive lumen output, flicker, and the potential consequences of light pollution on humans, wildlife and climate. As outlined above in our government response, these concerns are not novel and are addressed by exemptions and functionality requirements in the proposed regulations.

Question 2

Q.2 Do you agree with our intention to introduce the new energy labelling requirements for lighting products in GB, as set out in the draft Regulations (reflecting what the UK agreed at EU level as a Member State in December 2018)? Yes/No

If you do not agree, please provide reasons supported by evidence where possible.

We received 27 responses from a range of stakeholders including manufacturers, retailers, businesses, professional bodies, trade associations, charities, academics, members of the public and others. **20 responded yes, 7 responded no.**

Respondents were overwhelmingly in favour of the new energy labelling requirements being introduced, but several businesses and trade associations specifically mentioned that they wanted the GB Regulations to reflect the amendments made at EU level. Two stakeholders from lighting businesses disagreed with introducing the new requirements, highlighting concerns that there would need to be two label designs on packaging (one for GB and one for the EU), and that businesses may need more time to implement the changes. However, the proposed regulations do not specifically introduce a GB energy label for lighting products as these changes were implemented from 1 January. Instead, the proposed regulations transition from the old A+++ - D label to the new rescaled label covering grades A – G.

Most stakeholders who agreed did so with no further comment.

Question 3 and 4

Questions 3 and 4 asked respondents about our intention to implement the proposed GB ecodesign and energy labelling requirements for lighting products from 1 September 2021.

Q.3 Do you agree with our intention to implement the proposed GB ecodesign and energy labelling requirements for lighting products from 1 September 2021?

Q.4 Do you agree that this implementation date (1 September 2021) is achievable for SMEs (Small and Medium Enterprises, i.e., businesses with fewer than 250 employees)? If you do not agree, what support or allowances could be given to small and micro businesses to help them meet this implementation date, or what transitional period should be allowed?

We received 27 responses to question 3 and 26 responses to question 4 from a range of stakeholders including manufacturers, retailers, businesses, professional bodies, trade associations, charities, academics, members of the public and others.

18 respondents agreed with the proposed implementation date of 1 September 2021, nine disagreed. 16 respondents agreed the implementation date should be achievable for SMEs, 10 disagreed.

Responses highlighted similar views to those presented in response to questions 1 and 2, namely a preference for GB to adopt the EU's amendments to their lighting Regulations, and, to a lesser extent, concerns about businesses not being prepared to adopt the changes in the timeframe.

At our stakeholder roundtable, a lighting industry trade association representative explained that the lighting industry have been working towards September as the implementation date for the equivalent EU regulations, and therefore a transition date would be unnecessary. This was reiterated in their response to the consultation.

Of the respondents who agreed the implementation date should be achievable for SMEs, three members of industry added this was on the basis of GB also adopting the EU's amendments. Of those who disagreed, 6 cited possible health concerns, however these responses were not deemed relevant to the specific question asked. A consumer and manufacturer both highlighted the need for sufficient time for businesses to prepare, with the manufacturer suggesting six months would be sufficient. One lighting industry business disagreed with the implementation date, suggesting there was not enough time to prepare for the changes considering coronavirus (COVID-19). The proposed regulations allow a month for the transition period.

A retailer who disagreed felt that additional support in the form of monetary allowances should be provided so businesses could redesign and replace packaging. The retailer also added a concern that consumers may be confused over the energy label changes and mistake old A+++ lamps as being more efficient than those graded in the highest classes under the new label.

Question 5

Q.5 Do you agree with our intention to review the draft Regulations no later than 5 years from their date of application? Yes/No

If you do not agree, please provide reasons supported by evidence where possible.

We received 28 responses from a range of stakeholders including manufacturers, retailers, businesses, professional bodies, trade associations, charities, academics, members of the public and others. **19 agreed, 9 disagreed.**

The majority of those who agreed did so without further comment. Of those who disagreed, 5 cited possible health concerns, with some asking for an earlier review. One manufacturer stressed concern that manufacturing needs a period of stability between changes to regulations. In contrast, a consumer suggested the Regulations should be reviewed every year due to the fast-paced nature of technological changes.

Question 6 and 7

Questions 6 and 7 asked stakeholders about the benefits and costs of introducing these GB ecodesign and energy labelling requirements for lighting products.

Q.6 Do you agree with our assessment of the benefits of introducing these GB ecodesign and energy labelling requirements for lighting products?

Q.7 Have the costs, in general, to UK businesses of introducing these GB ecodesign and energy labelling regulations for lighting products been assessed adequately?

We received 28 responses to question 6 and 20 responses to question 7 from a range of stakeholders including retailers, consumers, manufacturers, trade associations, charities, academics, a professional body, a business, a tour operator, a production company, a consumer group and a cultural organisation. **17 agreed with our assessment of the benefits of introducing the GB ecodesign and energy labelling requirements, 11 disagreed.**

11 stakeholders agreed with no further comment. A further 6 respondents agreed in principle.

Of those who agreed in principle, various reasons were provided. A stakeholder from the entertainment lighting industry reiterated the view that this sector needs to be considered separately from general lighting due to its unique performance requirements and the way it is used by lighting professionals.

A lighting charity representative commented that there may be an over-estimate of financial and carbon savings from lighting Regulations, due to the elasticity of demand for lighting as a commodity increasing as its price falls. An individual provided a similar argument, saying that as more electricity is generated by renewables, the carbon savings attributed to ecodesign requirements will reduce. However, no evidence for these responses was provided.

6 respondents agreed, 14 respondents disagreed that the costs to UK businesses have been adequately assessed, four of these with no further comment. The responses generally fell into the themes of divergence from the EU, the timeframe to assess costs, and the need to retain incandescent lighting for those with photosensitivity.

Of those who disagreed, 5 cited possible health concerns, however these responses were not deemed relevant to the specific question asked.

Most respondents felt that there would be increased packaging costs as products for the EU and UK markets would require different energy labels.[7] A few of these respondents argued that the packaging size may need to increase to accommodate for this. This view was echoed in our stakeholder roundtable meeting.

[7] This is not technically a result of these regulations but a change that occurred on 1 January 2021 as a result of the United Kingdom withdrawing from the European Union on 31st January 2020 and entering a Transition Period, which ended at 11pm on 31 December 2020 and after which European Union law no longer applied in the UK.

Three stakeholders felt that the timeframe of the consultation did not allow adequate time for them to examine the costs which were provided in the impact assessment. This was echoed by two respondents who suggested the costs may be unknown and difficult to quantify because of the wide range of SMEs involved.

A respondent representing the entertainment lighting industry agreed in principle that costs to business have been adequately assessed. However, they stressed that due to the specialist nature of entertainment lighting, costs should be separately assessed for this portion of the market, when future versions of this regulation are considered.

Question 8

Q.8 What investment of resource, whether monetary costs or staff hours, do you estimate would be needed to prepare for the introduction of the new ecodesign and energy labelling requirements (for example, in order to familiarise with the legislation)? Yes/No

Are there any other costs that would result from the transition to the new requirements? Please specify.

We received 13 responses from a range of stakeholders including manufacturers, retailers, businesses, professional bodies, trade associations, academics and members of the public.

Some respondents including trade associations, manufacturers and retailers felt that investments would need to be both monetary and in staff hours. They highlighted the need for businesses to invest in familiarisation and understanding of the new Regulations and argued that costs will vary from business to business, depending on stock numbers, product range, and which staff are involved in product development. One professional body respondent suggested between 12 and 32 additional staff hours could be required per employee, although no additional evidence was provided for this.

Others felt there would be additional costs associated with logistics, old stock becoming unsaleable and consultancy costs to ensure compliance with the regulations.

Two respondents in the lighting industry suggested there would be no additional costs to meeting the new requirements, provided the EU amendments were included in the GB Regulations, as manufacturers have been closely tracking EU developments and have already invested in preparing for these.

Question 9

Q.9 Do you agree with our assessment of the impact of not introducing these GB ecodesign and energy labelling requirements for lighting products? Yes/No

Have any impacts of not introducing these requirements been overlooked?

We received 19 responses from a range of stakeholders including manufacturers, retailers, businesses, professional bodies, trade associations, charities, academics, members of the public and others. **12 agreed, 7 disagreed.**

Most respondents agreed with our assessment of the impact of not introducing ecodesign and energy labelling requirements for lighting products.

Of those who disagreed, 6 said possible health concerns had been overlooked.

Question 10

Q.10 Can you provide any evidence in relation to the size of the manufacturing base for lighting products in the UK? Yes/No. If yes, please provide evidence where possible.

What proportion of UK-based manufacturers are SMEs (Small or Medium Enterprises, defined as businesses with fewer than 250 employees)? Please provide evidence where possible.

We received 9 responses from a range of stakeholders including retailers, members of the public, manufacturers, trade associations and a business.

One respondent from a trade association provided statistics suggesting the UK lighting market was worth £2.3bn in 2019. The responses supported the assertion that the majority of companies manufacturing and importing lighting products are SMEs.

A respondent from the entertainment lighting industry suggested that almost all UK-based manufacturers in the entertainment sector are SMEs.

One manufacturer and one retailer stated that due to the high labour costs in the UK, most lighting products in the EU and UK are produced in Asia. However, no evidence was provided to support this.

Questions 11 and 12

Questions 11 and 12 asked about the potential impacts on SMEs if the new ecodesign and energy labelling requirements were implemented in GB.

Q.11 Can you provide evidence as to whether any UK-based SMEs may be forced to exit the market due to potentially high barriers to operating as a result of implementing these requirements for lighting products in GB?

Q.12 What would be the impacts on SMEs in particular if the new ecodesign and energy labelling requirements were implemented in GB? Thinking back to your answer to Q.8, are SMEs affected differently or disproportionately by the costs you described here?

We received seven responses to question 11 and 11 responses to question 12 from stakeholders including retailers, consumers, manufacturers, trade associations, members of the public and a professional body.

Six respondents agreed that UK-based SMEs may be affected disproportionately by costs and therefore forced to exit the market due to high barriers to operating as a result of implementing these requirements for lighting products in GB. A trade association suggested these costs were likely to be due to requiring additional compliance knowledge. Two respondents felt that UK companies would be at a disadvantage because of additional costs to UK businesses due to having to decide between supplying the UK market or the rest of the world. However, as the GB Regulations will reflect the technical requirements of the equivalent EU Regulations, UK-based SMEs should be less likely to be subject to these potential issues.

One retailer mistook this to mean retailers would have to dispose of old, unsaleable stock due to the new Regulations and therefore increase their product prices due to their own costs increasing. This is not the case – old stock placed on the market before September 2021 can continue to circulate to end-users.

One stakeholder from a lighting trade association stated that their members had been aware of the EU Regulations and their amendments during their development, and therefore should be prepared for them being adopted in GB too. A representative of the entertainment lighting industry echoed this response.

Question 13

Q.13 To what extent would stakeholders plan to align with EU standards for lighting products in the absence of GB-specific regulation?

We received 20 responses from a range of stakeholders including manufacturers, retailers, businesses, professional bodies, trade associations, charities, academics, members of the public and others.

11 respondents said industry would plan to align with EU standards in the absence of GB-specific regulation. Two further respondents said industry would align in principle but cited concerns over ensuring energy labels were GB-specific.

A retailer highlighted that businesses selling to Ireland would have to align with EU standards regardless of GB Regulation being implemented or not. An individual added that it would be more cost effective for businesses to be able to export to the EU.

Question 14

Q.14 Would there be any impact on imports/exports of lighting products from/to the EU in the absence of GB-specific regulation?

We received 14 responses from a range of stakeholders including retailers, members of the public, manufacturers, trade associations, a professional body, and a business.

The majority of respondents felt UK businesses would experience significant disadvantage compared to EU ones in the absence of GB-specific Regulations. A lighting professional body and a manufacturer agreed that in the absence of GB-specific Regulation reflecting EU requirements, UK products would cease to be compliant with EU requirements but that EU products would still be compliant with GB requirements. This, they argued, would create a disadvantage to UK manufacturers.

During our stakeholder meeting, a trade association representative expressed concern about 'product dumping' of less energy efficient products from Asia, and the potential safety concerns associated with these products. This was reiterated in several responses we received to the consultation. A trade association added to this argument, stating that UK products may also not be suitable for markets outside the EU which choose to align with the EU.

Three respondents disagreed but did not provide any further information on why they held these views.

Question 15

Q.15 What impact would maintaining consistency with the EU's 2021 requirements have on innovation in lighting products in GB? Can you provide any quantitative evidence on the rate of innovation within GB and worldwide markets for lighting products?

We received 16 responses from a range of stakeholders including retailers, members of the public, manufacturers, trade associations, a professional body, and a business.

Three stakeholders felt that there would be no impact on innovation. One respondent expressed a view that the lighting products regulated by ecodesign, such as light sources and control gear, are common across international markets and UK innovation tends to be in luminaire and lighting installation design, and lighting controls.

Four stakeholders pointed out the positive impacts of maintaining consistency with the EU's amendments. These focused on access to the wider EU market, which would therefore

stimulate innovation and providing a level playing field for manufacturers and purchasers wanting to sell and buy products in the UK and EU.

None of the respondents were able to provide quantitative evidence on the rate of innovation within GB and worldwide markets for lighting products.

Summary of responses in relation to future lighting products policy beyond 2021

To build on the evidence gathered by the Government's recent Call for Evidence[8], we asked respondents for their views on how ecodesign standards or energy labelling requirements for lighting products could be improved in the future. Together this body of evidence will support the development of future ecodesign and energy labelling policies for lighting products. Any proposed future interventions will consider the impacts on business, consumer bills, and carbon savings to ensure that the regulations deliver a net benefit to the UK and do not place an unnecessary burden on businesses.

Questions 16 to 22 of the consultation asked respondents if better regulation beyond 2021 could make lighting products policy more effective.

Question 16

Question 16 asked respondents if a technology neutral approach to setting MEPS for lighting products could save carbon and save consumers money. Such an approach would calculate efficacy through a simple lumens/watt metric without the use of end loss factors which keep poor performing lamps on the market. We estimate that implementing a technology neutral approach in GB from 2023 would save 0.7 MtCO2e over Carbon Budget 4 (2023-2027), 1.0 MtCO2e over Carbon Budget 5 (2028-2032), and take the contribution of lighting products to Net Zero from 1.3 MtCO2e to 3.8 MtCO2e, increasing household energy bill savings by a further £1.4 billion.

16a. Could the minimum energy performance standard for all light sources be set to 120 lumens/watt from 2023 and then raised to 140 lumens/watt from 2025 in the UK? Please provide a reason for your answer.

16b. What would be the impact on business and consumers? Please provide evidence and/or data.

We received 27 responses to Question 16a, and 19 responses to Question 16b from a range of stakeholders including members of the public, businesses, trade associations, and professional bodies. In response to Question 16a, **five responded yes, 15 responded no, seven did not answer**.

While some respondents felt a technology-neutral approach could be taken for regulating lighting products, most respondents disagreed that a single minimum efficiency level for all lamps would be most the appropriate approach to regulation. Those from industry felt the application of lighting products is too broad to be effectively captured by a single level and

[8] Energy-related Products: Call for Evidence. Available at: https://www.gov.uk/government/consultations/energy-related-products-call-for-evidence

were concerned that lights used for specialist applications (which are exempt from the current regulations), or some higher quality lighting may struggle to meet the standards. Other respondents felt the standards should also offer more consideration of the potential health impacts of lighting products. Despite the challenges raised by respondents about the appropriateness of a technology-neutral approach, several felt the standards could be met by certain lamps and that appropriate separation based on lighting application or sensible exemptions could make the policy proposal more practical.

Technology neutral approach not suitable (eight responses)

Eight respondents including trade associations, manufacturers and business felt that a technology neutral approach would not be suitable for regulating all lighting products. Most of these respondents felt that lighting products are used in a variety of applications and that a single metric would be inadequate in regulating a complex market. Respondents were concerned that lights which are necessary for certain niche and specialist applications could not meet the MEPS, and that the policy proposal could discriminate against these lights which are well suited for their task. There was also a concern that low power or higher quality lighting would be discriminated against. Respondents felt appropriate separation between lighting applications would be required in the policy proposal. A manufacturer felt that allowances would be required for additional functionality such as smart functionality and colour tuning which could increase energy consumption. Several of these respondents felt the main impact of the policy proposal would be less choice for consumers and greater difficulty in finding light sources required for specific applications.

Considerations for potential health impacts (Ten responses)

Ten members of the public raised concerns about the potential negative effects to health caused by certain lighting products. BEIS will continue to work closely with Public Health England to understand and address these concerns.

The respondents felt that the proposed policy proposal could potentially limit access to light sources which they felt would be more suitable for people who are photosensitive. Concerns were that focusing on the metric on energy efficiency alone would not account for the quality of light, potentially disregarding the levels of flicker, blue light, or glare from a light source.

Limits for LED efficiency (four responses)

Four respondents from the lighting industry felt that LED technology was reaching the upper limit of what would be achievable in terms of improving energy efficiency. In addition, three of these respondents felt that it would be unachievable to meet higher performance requirements in the timeframe proposed as they had been working towards improving products on a five-year cycle.

Questions 17 and 18

Questions 17 and 18 asked respondents about the benefits of lighting controls, and what Government could do to support their installation and management.

Q.17 What are the benefits of better installation, management and use of lighting controls (for example, for the environment, for UK businesses, UK innovation)? Please provide evidence and/or data.

Q.18 To what extent could Government support the installation and management of lighting controls in order to help maximise carbon and bill savings for lighting products? In what form would any potential policy be most effective?

We received 17 responses to Questions 17 and 18 from a range of stakeholders including members of the public, businesses, trade associations, and charities.

Question 17

The majority of respondents including businesses and trade associations felt that the benefits of installing lighting controls would be significantly greater energy savings. Some respondents cited a report from the US DoE[9] which estimated possible energy savings ranging up to 70% depending on the application and type of controls used. They said controls for occupancy detection and daylight harvesting already reduce energy consumption by significant amounts.

Two respondents felt that using lighting controls would benefit biodiversity by minimising waste light, and another respondent felt that more personalised lighting levels would improve satisfaction and wellness. Three respondents including a charity felt lighting controls should include the option for people who are light-sensitive to be able to manually switch off the lights.

Two respondents said a requirement to install and maintain lighting systems would benefit UK business who specialise in this area.

Question 18

Four respondents from industry felt that mandatory requirements for the installation of lighting controls in commercial buildings could be introduced via the UK Building Regulations while two respondents felt that legislation similar to the EU Energy Performance of Buildings Directive[10], where heating and air-conditioning systems are inspected regularly could be introduced for lighting controls. Two respondents suggested that the EU Green Public Procurement for street lighting could be used as a model for procurement.

Some respondents felt that proper oversight was required beyond the initial installation of lighting controls. Two respondents felt that designs should be based on whole life cost and not construction costs. Three respondents felt that the designers of lighting systems should review contractor substitutions and that installations are checked. Another respondent felt design input should be required when building spaces are repurposed for another use. It was also stressed that the end user must know how to properly use the lighting controls to realise the benefits.

[9] U.S. Department of Energy: Energy Savings Forecast of Solid-State Lighting in General Illumination Applications Report, December 2019

[10] Directive 2010/31/EU on the Energy Performance of Buildings. Available at: https://eur-lex.europa.eu/eli/dir/2010/31/oj

Some respondents including businesses and a retailer felt support from the Government in terms of reward systems, grants, or energy discounts would benefit installation. A consumer group stressed that this would be important as office spaces are usually rented, so occupants who use the lights do not always choose the lighting system or pay for the electricity used. One respondent suggested that the Government could support metering to monitor and analyse energy use so that users could identify areas for improvement.

Question 19

Q.19 How can energy labels be made more useful for lighting products (e.g. by including average annual/lifetime energy costs, by using more/less text or imagery)?

We received 19 responses from a range of stakeholders including members of the public, businesses, trade associations, and retailers.

Two main themes emerged from responses: that labels should be as simple as possible, and that information relating to wellbeing and the environment should be included.

Simplicity (six responses)

Six responses suggested that the energy label would be more useful if they were simpler, with less information presented to the consumer. Two respondents suggested additional information could be accessed via a QR code. However, one stakeholder did suggest information on the quality of light would help some consumers.

Wellbeing and the environment (seven responses)

Seven respondents felt that information such as the colour temperature, spectral power distribution, and luminance levels of a light source would help consumers identify any potential effects to wellbeing and the environment.

Other opinions

Two stakeholders said energy labels are less useful for in the entertainment industry as lights are purchased for specific requirements. One of these stakeholders went on to say that information on standby power consumption and lifecycle carbon cost would help in their purchasing decisions. Two stakeholders said system efficiency should be displayed, while another two respondents suggested public awareness and education programmes would aid the uptake of more energy efficient lights as consumers are concerned about price and Wattage than energy efficiency. Two respondents raised concerns that rescaling energy labels every few years could confuse customers.

Questions 20 and 21

Questions 20 and 21 asked for respondent's views on how resource efficiency measures could make lighting products more environmentally friendly, and the balance Government would need to strike between energy and resource efficiency.

Q. 20 How can resource efficiency measures be used to further improve the environmental performance of lighting products throughout the product lifecycle? (Such measures may relate to aspects including materials used, emissions, pollution and waste generation, as well as durability, repairability, recyclability and ease of material recovery.)

Q. 21 How can Government balance the need to replace inefficient lighting products with more energy-efficient products with the need to maximise the resource efficiency of lighting products, including increasing their durability and expected lifetime?

We received 13 responses to question 20, and 11 responses to question 21 from a range of stakeholders including members of the public, businesses, and trade associations.

Question 20

Three respondents said the full life-cycle environmental cost of a product should be factored into regulations or provided as information for end users. Four respondents from industry suggested the UK could look at the work the EU is conducting on circular economy for luminaires or that Environmental Product Declarations could help. Three of these respondents said, however, that standards would need be developed first. Another two respondents suggested schemes such as tax advantages to incentivise reuse, or pre-paying for end-of-life recycling would be beneficial.

Question 21

Some respondents highlighted that the cost and environmental impact of replacing some older, more inefficient lights could outweigh the benefits of energy efficiency gains. One respondent suggested grants could help overcome this barrier. It was suggested by two respondents that increasing the lifetime of lighting products could be counterproductive if users are then reluctant to replace then with more efficient products at later points, and they suggested repurposing products could improve their efficiency. A concern was raised that consumers could be disincentivised from purchasing more resource efficient products if they ultimately cost more.

Two respondents highlighted some issues for lighting products are that they are replaced when not suitable for a new task (for example when refurbishing an office space) or that suitable replacements are no longer available on the market. They suggested that circular economy requirements should be mandatory where possible to address this.

Question 22

Q.22 Are there any other policy levers which could help lighting products to become more energy efficient or increase the use of the highest efficiency lighting products (e.g. public procurement)?

We received 22 responses from a range of stakeholders including members of the public, businesses, and trade associations.

Several respondents suggested that building requirements could be used to mandate the use of more energy efficient lights, while others suggested that incentive schemes could improve their uptake. Other respondents suggested that some use of lighting is unnecessary and reducing waste usage could yield energy savings.

Building requirements (six responses)

Six respondents including trade associations and businesses suggested regulating buildings would improve energy savings from lighting products. Suggestions included using Part L of the Building Regulations to require use of smart systems, updating minimum energy efficiency requirements for buildings and installations, and penalising buildings which use more energy than a typical building.

Incentive schemes (six responses)

Six respondents from industry suggested that incentive schemes such as Government grants could help the uptake of more energy efficient lights. Two respondents suggested implementing schemes which would replace inefficient lights in domestic homes with LEDs. Others suggested reviewing business rates, taxation policy, and classification of buildings to incentivise the uptake of energy efficient lights. Some respondents also suggested the use of public procurement.

Reducing waste usage (six responses)

Six respondents including members of the public suggested that the reduction of unnecessary lighting could save energy. Three respondents felt that it is not necessary for lights such as security lights to be switched on at all times and that lower luminance levels and softer colour temperatures could reduce light pollution. Two other respondents felt that the use of lights for billboards and illuminating buildings could be minimised.

Other opinions

Two respondents suggest consumer education campaigns could drive demand for energy efficient lights. A few respondents reiterated earlier concerns that some energy efficient lights could potentially impact their health.

Next Steps

The Government would like to thank those who contributed to this consultation. The views of those who contributed have informed the decisions made in this Government response.

We intend to lay the draft Regulations in Parliament in Summer 2021 with the intention of bringing them into force from 1 September 2021, subject to Parliamentary time.

As announced in the Prime Minister's Ten Point Plan for a Green Industrial Revolution, the Government intends to launch a world class policy framework for energy-related products later this year where more detail will be set out on future policy and ambition.

Contact Details

Enquiries regarding this publication should be sent to: efficientproducts@beis.gov.uk

Annex A: List of Respondents

Those who responded to the consultation either through Citizen Space or email were:

All-Party Parliamentary Group for Dark Skies
AMDEA
British Film Commission and Film London
British Film Institute
British Screen Forum
Dencon Accessories Ltd
Eclipse Light Sensitivity Support group – part of Lupus UK
ESTA (Entertainment Services and Technology Association)
IALD (International Association of Lighting Designers)
ILP
LightAware
Lighting Europe
Lingting Ever Ltd
Lutron EA Ltd
ML Accessories
NBC Universal International Operations Ltd
PLASA (Professional Lighting and Sound Association)
The Association of Lighting Designers
The Institute of Lighting Professionals
The Lighting Industry Association
WSP
23 private individuals

The attendees of the stakeholder meetings included members and representatives of:

Meeting 1 on proposed 2021 requirements	Meeting 2 on better policy beyond 2021
Association of Lighting Designers	Arup
Chartered Institution of Building Services Engineers	Association of Lighting Designers
(IALD) International Association of Lighting Designers	BEAMA
The Lighting Industry Association	Chartered Institution of Lighting Designers
WSP	CU Phosco Lighting
Zumtobel	Energy Saving Trust
	IALD (International Association of Lighting Designers)
	Institute of Engineering and Technology
	The Lighting Industry Association
	LightAware
	Lutron
	PLASA (Professional Lighting and Sound Association)
	WSP
	Zumtobel

Annex B: Catalogue of Questions

Q.1 Do you agree with our intention to introduce the new ecodesign requirements for lighting products in GB, as set out in the draft Regulations (reflecting what the UK agreed at EU level as a Member State in December 2018)? If you do not agree, please provide reasons supported by evidence where possible.

Q.2 Do you agree with our intention to introduce the new energy labelling requirements for lighting products in GB, as set out in the draft Regulations (reflecting what the UK agreed at EU level as a Member State in December 2018)? If you do not agree, please provide reasons supported by evidence where possible.

Q.3 Do you agree with our intention to implement the proposed GB ecodesign and energy labelling requirements for lighting products from 1 September 2021?

Q.4 Do you agree that this implementation date (1 September 2021) is achievable for SMEs (Small and Medium Enterprises, i.e. businesses with fewer than 250 employees)? If you do not agree, what support or allowances could be given to small and micro businesses to help them meet this implementation date, or what transitional period should be allowed?

Q.5 Do you agree with our intention to review the draft Regulations no later than 5 years from their date of application? If you do not agree, please provide reasons supported by evidence where possible.

Q.6 Do you agree with our assessment of the benefits of introducing these GB ecodesign and energy labelling requirements for lighting products?

Q.7 Have the costs, in general, to UK businesses of introducing these GB ecodesign and energy labelling regulations for lighting products been assessed adequately?

Q.8 What investment of resource, whether monetary costs or staff hours, do you estimate would be needed to prepare for the introduction of the new ecodesign and energy labelling requirements (for example, in order to familiarise with the legislation)? Are there any other costs that would result from the transition to the new requirements? Please specify.

Q.9 Do you agree with our assessment of the impact of not introducing these GB ecodesign and energy labelling requirements for lighting products? Have any impacts of not introducing these requirements been overlooked?

Q.10 Can you provide any evidence in relation to the size of the manufacturing base for lighting products in the UK? What proportion of UK-based manufacturers are SMEs (Small or Medium Enterprises, defined as businesses with fewer than 250 employees)? Please provide evidence where possible.

Q.11 Can you provide evidence as to whether any UK-based SMEs may be forced to exit the market due to potentially high barriers to operating as a result of implementing these requirements for lighting products in GB?

Q.12 What would be the impacts on SMEs in particular if the new ecodesign and energy labelling requirements were implemented in GB? Thinking back to your answer to Q.8, are SMEs affected differently or disproportionately by the costs you described here?

Q.13 To what extent would stakeholders plan to align with EU standards for lighting products in the absence of GB-specific regulation?

Q.14 Would there be any impact on imports/exports of lighting products from/to the EU in the absence of GB-specific regulation?

Q.15 What impact would maintaining consistency with the EU's 2021 requirements have on innovation in lighting products in GB? Can you provide any quantitative evidence on the rate of innovation within GB and worldwide markets for lighting products?

Q. 16a Could the minimum energy performance standard for all light sources be set to 120 lumens/watt from 2023 and then raised to 140 lumens/watt from 2025 in the UK? Please provide a reason for your answer.

Q.16b What would be the impact on businesses and consumers? Please provide evidence and/or data.

Q.17 What are the benefits of better installation, management and use of lighting controls (for example, for the environment, for UK businesses, UK innovation)? Please provide evidence and/or data.

Q.18 To what extent could Government support the installation and management of lighting controls in order to help maximise carbon and bill savings for lighting products? In what form would any potential policy be most effective?

Q.19 How can energy labels be made more useful for lighting products (e.g. by including average annual/lifetime energy costs, by using more/less text or imagery)?

Q.20 How can resource efficiency measures be used to further improve the environmental performance of lighting products throughout the product lifecycle? (Such measures may relate to aspects including materials used, emissions, pollution and waste generation, as well as durability, repairability, recyclability and ease of material recovery.)

Q.21 How can Government balance the need to replace inefficient lighting products with more energy-efficient products with the need to maximise the resource efficiency of lighting products, including increasing their durability and expected lifetime?

Q.22 Are there any other policy levers which could help lighting products to become more energy efficient or increase the use of the highest efficiency lighting products (e.g. public procurement)?

This publication is available from: www.gov.uk/government/consultations/draft-ecodesign-and-energy-labelling-regulations-lighting-sources-2021

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