



Department for
Business, Energy
& Industrial Strategy

Ecodesign and energy labelling for lighting products

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

Closing date: 27 January 2021



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Introduction

Energy-related products are goods, such as washing machines, lighting equipment 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; make products more energy and resource efficient; and drive product innovation. In 2020 alone, it is estimated that these policies will **save 8 MtCO₂e and £100 on annual energy bills** for the average dual-fuel household in the UK.¹ These savings are important as energy-related products account for approximately 55% of total (non-transport) energy use in the UK with lighting, alongside gas boilers, electric motors and water pumps, accounting for a large proportion of this. Ecodesign and energy labelling policies will therefore play an important 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 requirements, whilst **energy labelling** aims to drive the uptake of the most energy efficient products on the market by providing consumers with information on the energy performance of the products they are buying. Ecodesign requirements can also facilitate progress towards a more circular economy by setting requirements relating to aspects of a product's resource efficiency, at any point in the product lifecycle from production to end-of-life. These include material consumption, emissions, pollution and waste generation, as well as durability, repairability, recyclability and ease of material recovery.

When it was a Member State, the UK took a leading role in pushing for both ambitious and realistic EU ecodesign and energy labelling requirements. In Winter 2018/19, the UK voted in favour of new requirements for certain energy-related products. Some of these requirements take effect before the end of the Transition Period and so will be saved in UK law from 1st January 2021, whereas those due to come into force in 2021 require us to introduce specific legislation to ensure that Great Britain realises the associated benefits.

In September 2020, Government published a consultation on the new ecodesign requirements for electric motors, welding equipment, household washing machines/washer-dryers, household dishwashers, household refrigeration, commercial refrigeration and electronic displays in Great Britain; we will respond to this consultation ahead of laying Regulations in 2021.

This consultation proposes that, in 2021, Great Britain adopts the ecodesign and energy labelling requirements for lighting products to reflect what the UK voted for as a Member State in 2018/19. Our support for these new requirements was affirmed at the time by our own cost-benefit analysis and engagement with UK interested parties. EU ecodesign and energy labelling regulations will continue to apply in Northern Ireland in accordance with the Northern Ireland Protocol.

¹ BEIS estimates – savings in relation to having no products policy measures.

We expect these proposed lighting regulations to save **21.9 TWh of electricity by 2050** if we adopt them in September 2021, which is the equivalent of up to a **£0.6 billion reduction on household energy bills**. This will also result in **2.6 MtCO₂ of Carbon Savings** by 2050.

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, it is a fact that from 1st January 2021, the UK will gain powers to enable it to set its own requirements (subject to the terms of the Northern Ireland Protocol). Government's recent Call for Evidence² sought views on how the UK can use this new independence to improve its ecodesign and energy labelling regulations in ways that maximise the benefits for UK businesses and consumers.

Among other things, we explored the possibility of raising ecodesign requirements for lighting products, which we believe could yield greater energy, resource and carbon savings than are currently being achieved by EU regulations. To build on the evidence gathered by the Call for Evidence, this consultation includes a number of questions designed to delve deeper into how ecodesign and energy labelling regulations for lighting products could be improved in the future. We estimate that a further 2.5 MtCO₂e could be saved by 2050 if we were to raise minimum energy performance standards (MEPS) for lighting products in 2023; these additional savings could make an important contribution to the Government's Carbon Budget 4 and 5 targets, and to Net Zero. We are also interested to explore how better regulation could make lighting products policy more effective.

The responses to this section of the consultation will supplement those gathered by the Call for Evidence; 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 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.

Following this consultation, we plan to lay regulations in Parliament to implement the 2021 requirements; and we will continue to engage with interested parties to test future policy proposals as they develop.

² More information on the [Call for Evidence](#)

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General information

Why we are consulting

The draft Ecodesign for Energy-Related Products and Energy Information (Lighting Products) Regulations 2021 (“the draft Regulations”) relate to light sources and separate control gears (“lighting products”) and are intended to update the existing ecodesign and energy labelling requirements which currently apply to these products in the UK. The proposals reflect what was agreed by the UK as an EU Member State in Winter 2018/19.

Under our ecodesign and energy labelling powers, the Secretary of State is required to consult on any proposed regulations and the associated Impact Assessment when making new product-specific regulations. These powers are:

- For ecodesign, new regulation 22 of the Ecodesign for Energy-Related Products Regulations 2010, as amended by the Ecodesign for Energy-Related Products and Energy Information (Amendment) (EU Exit) Regulations 2019 with changes coming into force at the end of the Transition Period;
- For energy labelling, the new Article 11 which will exist in the retained Energy Labelling Framework Regulation (EU) 2017/1369 as amended by the Ecodesign for Energy-Related Products and Energy Information (Amendment) (EU Exit) Regulations 2019 with changes coming into force at the end of the Transition Period.

This consultation sets out what the draft Regulations for lighting products are trying to achieve and asks whether stakeholders agree with the following:

- the proposed ecodesign and energy labelling requirements themselves;
- our assessment of the costs and benefits of the draft Regulations as well as our appraisal of other policy options, as set out in the Impact Assessment; and
- our intention to review the draft Regulations no later than 5 years after implementation.

The draft Regulations will apply in Great Britain only; in accordance with the Northern Ireland Protocol, EU Ecodesign and Energy Labelling Regulations will continue to apply in Northern Ireland Post-Transition Period. Respondents should note that, despite this, the associated Impact Assessment assesses the impacts for the UK as a whole.

We anticipate that manufacturers, their authorised representatives, importers, trade bodies, consumer groups, environmental organisations and other civil society organisations with an interest in lighting products may wish to respond to this consultation. The consultation may also be of interest to those with a more general interest in energy efficiency, resource efficiency, circular economy and climate change.

Following this consultation, we will consider whether revisions, if any, are needed to the draft Regulations. We will publish a final Impact Assessment alongside the Regulations when they are laid in Parliament.

Consultation details

Issued: 18 November 2020

Respond by: 27 January 2021 at 11:45pm.

Enquiries to:

The Energy-Using Products Team

Energy Efficiency and Local Directorate
Department for Business, Energy & Industrial Strategy
1 Victoria Street, London, SW1H 0ET

Email: efficientproducts@beis.gov.uk

Consultation reference: Ecodesign and energy labelling requirements for lighting products

How to respond

We encourage respondents to make use of the online e-consultation wherever possible when submitting responses as this is the Government's preferred method of receiving responses.

The e-consultation platform can be found at: beisgovuk.citizenspace.com/energy-efficiency/ecodesign-energy-labelling-regs-lighting-sources.

However, responses sent to the above email will also be accepted.

For ease of reference, questions posed throughout the document are also listed together in a catalogue of questions at the end of this consultation.

Your response will be most useful if it is framed in direct response to the questions posed, though further comments and evidence are also welcome. To aid our analysis, please state 'yes' or 'no' to indicate whether you agree or disagree with each proposal. If you have information which supports your view, we invite you to provide details of this.

Confidentiality and data protection

Information you provide in response to this consultation, including personal information, may be disclosed in accordance with UK legislation (the Freedom of Information Act 2000, the Data Protection Act 2018, and the Environmental Information Regulations 2004).

If you want the information that you provide to be treated as confidential please tell us but be aware that we cannot guarantee confidentiality in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not be regarded by us as a confidentiality request.

We will process your personal data in accordance with all applicable data protection laws. See our [privacy policy](#).

We will summarise all responses and publish this summary on [GOV.UK](#). The summary will include a list of names or organisations that responded, but not people's personal names, addresses or other contact details.

Quality assurance

This consultation has been carried out in accordance with the government's [consultation principles](#).

If you have any complaints about the way this consultation has been conducted, please email: beis.bru@beis.gov.uk.

Context and Background Information

What is ecodesign?

Ecodesign requires manufacturers of energy-related products to improve the performance of their products by meeting minimum energy and resource efficiency requirements before they can place their products on the market. As well as energy efficiency, ecodesign requirements can also relate to the environmental performance of products across the whole lifecycle from material extraction for manufacture to end-of-life treatment. This may include, for example, material consumption, emissions, pollution and waste generation, as well as durability, reparability, recyclability and ease of material recovery. This policy pushes industry to improve the energy efficiency and environmental performance of products and removes the worst performing products from the market.

Ecodesign represents one of the most cost-effective ways to reduce energy bills and carbon emissions and will help Great Britain to transition to a low carbon society whilst increasing economic growth. The UK Government's current estimates show that, taken together with related energy labelling requirements which allow consumers to choose the most energy efficient products, in 2020 ecodesign requirements will save around £100 for the average dual-fuel household on their energy bills and lead to greenhouse gas emissions savings of 8 million tonnes of CO₂e.

What is energy labelling?

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 labels help consumers make more informed decisions to choose more energy efficient products by presenting easily understood information on energy efficiency and product performance at the point of sale.

UK ecodesign and energy labelling after the Transition Period

To date, ecodesign and energy labelling policy measures have been set at an EU level and have subsequently taken direct effect in all Member States. To provide clarity and ensure continuity after the end of the Transition Period, we have already introduced legislation³ to ensure that all existing minimum performance and labelling requirements for energy-related products in households and the commercial sector remain enforceable in the UK from 1st January 2021. That legislation also allows us to introduce new or revised minimum performance and labelling requirements for energy-related products in the UK.

The UK left the EU on 31 January 2020 and following the end of the Transition Period on 31 December 2020, we will regain our economic and political independence. This means we will be able to set our own, better products policy regulations to maximise benefits for UK

³ The Ecodesign for Energy-Related Products and Energy Information (Amendment) (EU Exit) Regulations 2019. Available at: <http://www.legislation.gov.uk/uksi/2019/539/contents/made> and The Ecodesign for Energy-Related Products and Energy Information (Amendment) (EU Exit) Regulations 2020 <https://www.legislation.gov.uk/ukdsi/2020/9780348213430>

consumers and businesses. In June 2020, the Government published a Call for Evidence which explored how the UK can improve its ecodesign and energy labelling policies⁴. Any future measures will be set following public consultation and with due consideration to the terms of the Northern Ireland Protocol. Future ecodesign and energy labelling regulations will seek to yield greater energy and carbon savings in order to support the delivery of our Carbon Budget and Net Zero targets. We are keen to explore how the principles of ‘better regulation’ could be applied to future products policy.

Ecodesign and energy labelling regulations for 2021

Whilst we develop the UK’s future ecodesign and energy labelling policy, it is important to continue to make progress towards our Carbon Budget and Net Zero targets. Between September 2018 and January 2019, the UK, as an EU Member State, voted in favour of a new package of EU ecodesign and energy labelling regulations, following a cost-benefit analysis and informal consultation with UK interested parties.

The ecodesign regulations covered eleven product groups, with the whole package of regulations estimated to save around 4.3 TWh of energy in 2030 and reduce net carbon emissions by 3.0 MtCO₂e over Carbon Budget 5 (2028-2032). Ecodesign regulations covering three of the eleven products - servers and data storage products, external power supplies and power transformers - will be saved in UK law from 1st January 2021 as they began to apply during the Transition Period. The remaining eight product-specific ecodesign requirements that the UK voted for begin to apply after the end of the Transition Period, in 2021. This means that Government must bring forward domestic secondary legislation if we want these requirements to apply in GB and the associated energy, carbon and bill savings to be realised.

The proposed ecodesign requirements for welding equipment, electric motors, household washing machines/washer-dryers, household dishwashers, electronic displays, household refrigeration and commercial refrigeration, along with proposed energy labelling requirements for commercial refrigeration, were subject to public consultation earlier this year⁵. The consultation closed on 11 November 2020 and Government will respond shortly, ahead of laying draft Regulations in Parliament in early 2021.

The package of EU regulations also included requirements to introduce re-scaled energy labels for a number of products⁶. These requirements will begin to apply in two stages. The first stage requires manufacturers to supply the new rescaled labels with their products from 1 November 2020. This requirement will be saved into GB law post-Transition Period. The second stage requires retailers to display the new rescaled labels at the point of purchase from 1 March 2021. We have introduced secondary legislation into Parliament to ensure that the March 2021 requirements are saved in GB law after the end of the Transition Period.

This consultation covers the ecodesign and re-scaled energy labelling requirements for the final product category, light sources and separate control gears (“lighting products”). The draft Regulations are annexed to this consultation. Subject to the outcome of the consultation, our

⁴ For more information on the Call for Evidence, see: <https://www.gov.uk/government/consultations/energy-related-products-call-for-evidence>

⁵ <https://www.gov.uk/government/consultations/draft-ecodesign-and-energy-labelling-regulations-2021>

⁶ Household washing machines/washer-dryers, household dishwashers, electronic displays, and household refrigeration

intention is to introduce secondary legislation in 2021 in order that these requirements will come into force from 1 September 2021.

Consultation already undertaken at EU and UK levels

The EU carried out a consultative process between 2013 and 2018 on all the products covered by this consultation. This involved in-depth "preparatory studies" with the involvement of stakeholders that explored the technical, economic, environmental, and social aspects of these product groups. Assessments of the impacts on the environment, industry, and consumers were also undertaken. The UK Government consulted UK stakeholders about the outcome of this process and the proposed draft Regulations at the time.

Next steps

The deadline for responding to this consultation is [xx]. Responses to this consultation will be taken into account when taking the ecodesign and energy labelling policies forward, and following the analysis of responses, the draft Regulations accompanying this consultation may be revised.

Lighting Products

Background on lighting products

In the UK, lighting accounts for approximately 26% of electricity use in buildings for the non-domestic sector⁷ and 13% for the domestic sector⁸. Global innovation in lighting technology in recent years has made it possible to achieve greater energy savings which, in turn, can reduce the overall amount of electricity required for lighting.

Until the end of the Transition Period, lighting products placed on the UK market are regulated under four products regulations:

- Commission Regulation (EC) No 244/2009 on ecodesign requirements for non-directional household lamps;
- Commission Regulation (EC) No 245/2009 on ecodesign requirements for fluorescent lamps without integrated ballast, high intensity discharge lamps and ballasts and luminaires able to operate as lamps;
- Commission Regulation (EU) No 1194/2012 on ecodesign requirements for directional lamps, Light Emitting Diodes (LED) lamps and related equipment; and
- Commission Regulation (EU) No 874/2012 on energy labelling requirements for electric lamps and luminaires.

These regulations will be retained in GB law after the end of the Transition Period. As noted above, however, the UK, together with other Member States, voted in favour of updating these regulations in December 2018.

Taken together, the scope of these regulations covers light sources, control gears, and luminaires. The definitions of these products are as follows⁹:

Light Source: A light source means an electrically operated product intended to emit, or, in the case of a non-incandescent light source, intended to be possibly tuned to emit, light, or both.

Control Gear: A control gear means one or more devices, that may or may not be physically integrated in a light source, intended to prepare the mains for the electric format required by one or more specific light sources within boundary conditions set by electric safety and electromagnetic compatibility. It may include transforming the supply and starting voltage, limiting operational and preheating current, preventing cold starting, correcting the power factor and/or reducing radio interference.

Luminaire: Luminaires are lighting units which contain one or more light sources, together with the parts designed to distribute, filter or transform the light transmitted from the light sources. They include all the parts necessary for supporting, fixing and protecting the light sources and, where necessary, the circuit auxiliaries together with the means for connecting them to the electric supply.

⁷ Building Energy Efficiency Survey, 2016

⁸ Energy Consumption in the UK, 2019

⁹ Complete definitions can be found in the draft regulations

New ecodesign and energy labelling requirements for 2021

Although the existing regulations have had a positive impact on the environment, our Impact Assessment shows that more carbon savings could be achieved if ecodesign and energy labelling requirements regulations for lighting products were updated. Revised EU requirements for lighting (for light sources and separate control gears) were agreed at the end of 2018 at EU level and are due to take effect from September 2021, with the phaseout of T8 linear fluorescent lamps taking effect from September 2023. Our estimates show that these proposed new requirements will achieve **1.8 MtCO₂e of carbon savings in the UK by 2030**, which increases to **2.6 MtCO₂e by 2050**. If agreed, the new requirements will apply from 1 September 2021 in Great Britain.

Summary

The draft Regulations propose to:

1. Simplify the ecodesign regulations by replacing the 3 ecodesign regulations currently in force with a single integrated set of regulations.
2. Review minimum energy efficiency requirements to reflect technological progress, this includes further phasing out less efficient lamp types.
3. Introduce requirements relating to the design and manufacture of products to facilitate removal of light sources and control gears from containing products.
4. Reform energy labels by rescaling the energy classes and reintroducing a homogenous A to G scale.¹⁰
5. Facilitate compliance by improving the definitions for scope and exemptions, and redefining tolerances for compliance verification.

Scope

The following products will be in scope of the draft ecodesign requirements:

- Light sources;
- Control gears combined with light sources as well as separate control gears; and
- Light sources and control gears that are integrated into containing products.¹¹

The following products will be in scope of the draft energy labelling requirements:

- Light sources with or without integrated control gear; and
- Light sources placed on the market in a containing product.

The draft Regulations propose adopting a **containing product** approach. A containing product is a product containing one or more light sources, or separate control gears, or both. Examples of containing products are luminaires that can be taken apart to allow separate verification of

¹⁰ Products currently in the top energy classes will be rescaled to lower classes. With this rescale, classes A and B would be empty as it would be difficult to develop class A and B products with the current technology landscape. Reforming energy labels also includes reintroducing a homogenous A to G scale (currently products can be rated from A+++ to E).

¹¹ Under this approach, luminaires would be classed as a containing product and either the light sources integrated in the containing product or the entire containing product must meet the minimum energy efficiency requirements.

the contained light source(s), household appliances containing light source(s), furniture (shelves, mirrors, display cabinets) containing light source(s). If a containing product cannot be taken apart for verification of the light source and separate control gear, the entire containing product is to be considered a source.

A list of lighting products which are exempt from the ecodesign and energy labelling requirements is set out in the draft Regulations.

The proposed requirements for lighting products

The proposed Regulations would require **manufacturers**¹² to:

In relation to energy efficiency:

- ensure that the declared power consumption of a light source does not exceed the maximum allowed power as set out in the draft Regulations;
- ensure that a separate control gear operating at full load meets the minimum energy efficiency requirements set out in the draft Regulations;
- ensure that a light source meets the functionality requirements set out in the draft Regulations;
- ensure that light sources and separate control gears display the information as set out in the draft Regulations on the product, packaging, and/or on a free to access website as specified in the draft Regulations;

In relation to resource efficiency:

- ensure light sources and separate control gears can be removed from containing products with the use of common available tools and without damage to the containing product unless a technical justification why this is not appropriate is provided;
- provide information about the replaceability or non-replaceability of light sources and separate control gears on free-access websites or packaging;
- ensure light sources and separate control gears can be dismantled from containing products at end of life with instruction available on free-access websites; and

The proposed Regulations would require **suppliers** to:

- ensure that each light source with or without integrated control gear, and each light source placed on the market in a containing product is supplied with an energy label in the format set out in the draft Regulations and that the obligations of suppliers as set out in the draft regulations are met.

The proposed updated requirements would require **dealers** in Great Britain to:

- ensure that at the point of sale each light source bears a label provided by the supplier in accordance with the draft Regulations and that the obligations of dealers as set out in the draft Regulations are met;
- ensure that any visual advertisement and any technical promotional material concerning a specific model of a light source contains the energy efficiency class of that model and the range of energy efficiency classes available on the label; and

¹² These requirements apply to manufacturers, importers and authorised representatives.

- ensure that existing labels on light sources at the point of sale are replaced by the rescaled energy labels in such a way as to cover the existing label within eighteen months after the application of the draft Regulations.

The Regulations may be changed following feedback received during this consultation or as a result of technical discussions on the requirements.

In the absence of the new requirements, there is little market competition to place energy efficient products on the market. Not adopting the new requirements would result in missed carbon and energy bill savings for Great Britain. Further, there may be excess supply of products that do not comply with the new requirements if non-GB manufacturers fail to plan for and adjust to the new EU requirements. These products may reach the GB market, negatively impacting on our carbon and energy bill savings.

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.

Timing of the lighting products draft Regulations

The draft Regulations propose to implement the ecodesign and energy labelling requirements for lighting products from 1 September 2021. Subject to the outcome of this consultation, we intend to lay the draft Regulations in Parliament in 2021.

Implementing new requirements that reflect what the UK agreed at EU level 2018 with the same coming into force date as in the EU will provide certainty and clarity to businesses. This will also prevent less efficient lighting products from being placed on the GB market. Further, this will allow GB to realise the full potential of energy and carbon emission savings from these requirements: 1.8 MtCO₂e by 2030, rising to 2.6 MtCO₂e by 2050.

The EU Regulations were agreed after a lengthy consultative process, which UK stakeholders were involved in. This process involved a preparatory study, an initial ecodesign working draft regulation, a Consultation Forum, notification of the draft EU regulation to the World Trade Organization, publication of the draft EU regulations, and a Regulatory Committee.

As a result, we have confidence that the requirements in the draft Regulations will be familiar to manufacturers already, and that they will be well prepared for the 1 September 2021 implementation date. We do not believe stakeholders will be impacted significantly by the relatively short lead time between GB's legislation being laid in Parliament and it taking effect. However, we would be keen to understand any possible issues, particularly for SMEs (Small and Medium Enterprises, defined as businesses with fewer than 250 employees) which might be affected by this legislation.

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?

Review of the lighting products draft Regulations

As required by the Ecodesign for Energy-Related Products Regulations 2010 (amended by the Ecodesign for Energy-Related Products and Energy Information (Amendment) (EU Exit) Regulations 2019), the draft Regulations must set a date for the evaluation and possible revision of the regulations

Our proposal is to review these draft Regulations for lighting products no later than 5 years from when they begin to apply in September 2021. This intended review period reflects the rate of technological progress for lighting products.

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.

Impact Assessment for the lighting products draft Regulations

An Impact Assessment for the draft Regulations for lighting products has been annexed to this consultation. The Impact Assessment considers the impact of the draft Regulations on individuals, groups, and businesses with the aim of understanding the overall impact on society.

We would welcome any comments on and additional evidence to support the analysis set out in this Impact Assessment, such as potential costs to UK businesses arising from the proposed regulations, as well as any additional benefits and risks.

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?

Better regulation for lighting products beyond 2021

We are not proposing at this point in time to set different ecodesign and energy labelling requirements for lighting products in 2021 than those we agreed at EU level as a Member State in 2018/19; subject to the outcome of this consultation, we plan to implement these requirements in GB from 1 September 2021. Between 2021 and 2050, these requirements are expected to save **21.9 TWh of energy**, which is the equivalent of **2.6 MtCO₂e** and **£0.6 billion in household energy bill savings**. However, our analysis indicates that there remains potential for further carbon and bill savings to be achieved in the UK lighting sector, including (but not exclusively) by introducing better minimum energy performance standards for lighting products in GB.

In this part of the consultation, we are seeking stakeholder views on how Great Britain could set better regulations for lighting products beyond 2021. The questions in this section are 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.¹³ Together, this body of evidence will support the development of better ecodesign and energy labelling policies for lighting products in the UK.

What the draft Regulations for 2021 will achieve

The draft Regulations proposed by this consultation will set revised minimum energy performance standards (MEPS) for light sources at levels such that some technologies (such

¹³ [Call for Evidence for Energy-related Products](#)

as Compact Fluorescent Lighting and halogens as well as low performing LEDs) will be phased out from September 2021 as they will not meet the new standard. Over Carbon Budget 4 (2023-2017), the 2021 regulations are expected to save an estimated 0.9 MtCO₂e, and a further 0.7 MtCO₂e over Carbon Budget 5 (2028-2032).

However, whilst these savings are impressive, the draft Regulations still allow for certain poor performing technologies to remain on the market despite not being able to achieve the level of efficiency required for better performing light sources. This is because, for the purposes of the draft Regulations, the required MEPS of a light source is defined using the 'Ponmax calculation'. The 'Ponmax' is the maximum allowed power of a light source and is defined as a function of the declared useful luminous flux and the declared colour rendering index. The baseline threshold efficacy which is used for this calculation is 120 lumens/watt, however this is reduced for certain lamps. The calculation also includes an end loss factor that is specific to the lighting technology and this end loss factor is a major determinant on the final efficacy required by a light source.

Using the Ponmax calculation means that the MEPS set by these Regulations are modified for several technologies including T8, T5 linear fluorescent lamps (LFLs) and some high intensity discharge lamps (HIDs) e.g. some sodium and metal halide lamps. The result is that these technologies can continue to be sold on the market at lower MEPS than potential LED substitutes, despite research by CLASP having shown that there are good LED replacements for these technologies.¹⁴

This demonstrates that there is scope for greater energy, carbon and bill savings to be made if a technology-neutral approach were taken, which would apply a single MEPS level across the board.

What could be achieved by better regulations beyond 2021?

BEIS analysis shows that a technology neutral approach would save carbon and save consumers money. Such an approach would remove the complexity of the EU light sources regulation Ponmax calculation, instead calculating efficacy through a simple lumens/watt metric without the use of end loss factors. The effect would be that poor performing lamps could not remain on the market.

We have applied this technology-neutral approach to our modelling of future GB policy options and have shown that the contribution of lighting products to achieving Carbon Budgets 4 and 5 could be significantly improved.

The policy scenario we have modelled is as follows and is based on GB implementing its own future lighting regulations in 2023 (i.e. after the 2021 regulations have been implemented):

- **Tier 1** – MEPS level of 120 Lumens/Watt for all light sources from 2023; and
- **Tier 2** (introduced in 2025) – increase MEPS level to 140 Lumens/Watt for all light sources from 2025.

Tier 1 would see an immediate phase out of all legacy lamps (LFLs and HIDs) and, subsequently, Tier 2 would drive the UK lighting market further towards more efficient LEDs.

Over Carbon budget 5 (2028-32), the carbon emissions for lighting are estimated to be 9 MtCO₂e from domestic lighting; 17 MtCO₂e from commercial lighting; and 1 MtCO₂e from

¹⁴ [CLASP \(2020\) 'Phasing out mercury-based lighting offers environmental and consumer benefits, report finds'](#)

street lighting. According to initial BEIS analysis, the draft Regulations for 2021 proposed earlier in this consultation will save 0.65 MtCO₂e over this period; and that implementing the better MEPS above in 2023 and 2025 would increase carbon savings by an additional 1 MtCO₂e on top of this.

Further, our analysis shows that implementing this policy scenario would achieve an additional 0.7 MtCO₂e over Carbon Budget 4 and by 2050, these better MEPS would take the contribution of lighting products to Net Zero from 2.6 MtCO₂e to 5.1 MtCO₂e, increasing household energy bill savings by a further £0.4 billion.

Our initial cost-benefit analysis shows this potential policy option to have a cost-benefit ratio of 4.50 (appraisal period up to 2050). The total cost to households and businesses would be £400 million, and the total benefit £1,800 million.

Impacts and other policy levers Government should consider

As shown, adjusting the minimum standards for lighting products on a technology-neutral basis has the potential to make a significant contribution to meeting the Government's Net Zero commitment. However, any increase in MEPS should not diminish the overall performance of lighting products available on the market or hamper innovation in this area

As we are in the early stages of developing better regulation for lighting products beyond 2021, we are seeking input from stakeholders on the feasibility and impacts of adjusting our MEPS for lighting from 2023, as set out in the policy scenario above. We are equally interested in evidence to support alternative future policy proposals for lighting which could yield benefits for UK businesses and consumers

We estimate that there are carbon and bill savings to be made at systems level through better installation, management, and use of lighting controls (e.g. by reducing operating hours) and are keen to understand the role Government can play in maximising these.

In addition, we are seeking to understand how better energy labels could drive the uptake of more energy efficient lighting products and help consumers choose products most suited to their needs.

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)?

Next steps

Responses to this consultation will be taken into account when taking the policy forward, and following the analysis of responses, the draft Ecodesign for Energy-Related Products and Energy Information (Lighting Products) Regulations 2021 may be revised. We intend to lay regulations in Parliament in 2021.

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.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.

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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)?

Annexes

These Annexes are published as separate documents alongside this consultation.

- Annex A: Text of the draft Ecodesign for Energy-Related Products and Energy Information (Lighting Products) Regulations 2021
- Annex B: Impact Assessment

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

If you need a version of this document in a more accessible format, please email enquiries@beis.gov.uk. Please tell us what format you need. It will help us if you say what assistive technology you use.