



June 24, 2021

Via e-mail: GSL2021STD0005@ee.doe.gov.

Dr. Stephanie Johnson
U.S. Department of Energy
Office of Energy Efficiency and Renewable Energy
Building Technologies Office, EE-5B, 1000
Independence Avenue SW, Washington, DC 20585-0121

RE: Docket EERE-20X21-BT-STD-0005

Dear Dr. Johnson:

Signify (formerly Philips Lighting) appreciates the opportunity to comment on this Request For Information (RFI). regarding General Service Lamps (GSL).

Signify is the world leader in lighting for professionals, consumers, and lighting for the Internet of Things. Our energy-efficient lighting products, systems, and services enable our customers to enjoy a superior quality of light and make people's lives safer and more comfortable, businesses more productive and cities more livable.

Sustainability and the fight against climate change are core to our business ranging from our energy-efficient product portfolio to how we operate as a company. To date, we have sold over 3 billion energy-efficient LED lamps worldwide and over 80% of our sales are LED-based. Operationally we achieved carbon neutrality in 2020, we use 100% renewable electricity, have zero waste to landfill, and have an audited sustainable supply chain. In 2020, 2019, 2018, and 2017 we were the Industry Leader in our category ('Electrical Components and Equipment' category) in the Dow Jones Sustainability Index.

Please contact me if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'David Woodward', with a stylized flourish at the end.

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Comments

DOE GSL RFI

Docket EERE-20X21-BT-STD-0005

June 24, 2021

General

As a member of the National Association of Electrical Manufacturers (NEMA), Signify supports their comments submitted in request to this RFI.

Signify can support a minimum efficacy requirement of 45 LPW for General Service Lamps provided that we have a **minimum of 12 months to implement it from the date of publication of any final rule and that it is implemented initially via a manufacturing date/importation ban, followed if necessary with a subsequent retail sales ban.** A sales ban is difficult to implement and requires end-to-end management of stock and components and can result in high financial liabilities for manufacturers and retailers due to stranded inventory that cannot be sold and must be scrapped and sent to landfills. As pointed out in NEMA's comments to recent GSL rulemakings and this RFI, the Energy Independence and Security Act (2007) gives DOE the authority to consider a phased-in approach and as such, a manufacturing/importation date ban followed by a retail sales ban would be a more workable approach for industry, retailers, and consumers.

We also request that exemptions be given or continue for the following lamp types since meeting a 45LPW minimum requirement is a problem and/or they are problematic to make with LED technology:

- Heat (infrared) lamps
- Blacklight lamps (and any ultraviolet lamps)
- Appliance lamps
- Bug and Colored lamps
- Specialty MR lamps for entertainment
- 12V landscape lighting applications
- Plant Light Lamps
- Marine Lamps
- Marine Signal Service Lamps
- Mine Service Lamps
- R20 Short lamps
- Sign Service lamps
- Traffic Signal replacement lamps
- T4 120V Halogen capsule lamps with light output higher than 600 lumens
- T3/R7s 120V linear halogen lamps



Issue 1: DOE requests information on the availability of lamps defined as GSLs that have a minimum efficacy of 45 lm/W. To the extent available, DOE requests information for all lumen outputs, voltages, and base types included in the GSL definition.

Please refer to the comments submitted by NEMA.

Issue 2: DOE requests information on the availability of lamps excluded from the definition of GSL that have a minimum efficacy of 45 lm/W. To the extent available, DOE requests information for all lumen outputs, voltages, and base types of such lamps.

Please refer to the comments submitted by NEMA.

Issue 3: To the extent that any lamp type within the definition of GSL or any lamp type excluded from the definition of GSL already performs at a minimum efficacy of 45 lm/W, DOE requests information on the percent of the market of that lamp type represented by the 45lm/W lamps.

Please refer to the comments submitted by NEMA who is more appropriate to comment on the overall US GSL market.

Issue 4: If a lamp type within the definition of GSL or a lamp type excluded from the definition of GSL does not currently have units with an efficacy of at least 45 lm/W, DOE requests information on whether it is possible to create lamps in that category that perform at such a level and how long it would take for those products to be sold at retail locations.

We agree with the comments submitted by NEMA regarding the difficulties of replacing all incandescent and halogen lamp types with LED versions. In general LED's have problems with high temperatures and consequently, this limits their use in some applications where they will either experience high operating temperatures due to the environment (e.g., appliance lamps for ovens) or due to the design constraints imposed by requirements such as high lumen output and/or very small physical lamp envelopes. For example, retrofit LED lamps for some T4/GY6.35 halogen capsule lamps can only be made with lumen packages up to 600 lumens while LED replacements for T3/R7s linear halogen lamps can match the required lumen outputs but only in larger form factors which may lead to problems fitting in fixtures or poor optical performance.

For many lamp types defined as GSL's per the current definition, LED versions are possible. However, we request that exemptions be given or continue for the following lamp types since meeting a 45LPW minimum requirement is a problem and/or they are hard to make with LED technology:

Heat (infrared) lamps
Blacklight lamps (and any ultraviolet lamps)



Appliance lamps
Bug and Colored lamps
Specialty MR lamps for entertainment
12V landscape lighting applications
Plant Light Lamps
Marine Lamps
Marine Signal Service Lamps
Mine Service Lamps
R20 Short lamps
Sign Service lamps
Traffic Signal replacement lamps
T4 120V Halogen capsule lamps with light output higher than 600 lumens
T3/R7s 120V linear halogen lamps

Typically, we find that if a LED lamp design is technically feasible, and assuming that there is a reasonable financial justification (i.e., business case) for the product development and manufacturing efforts associated with bringing a new product to market, the typical development time for a single new lamp is approximately six months, followed by up to an additional six months to fill the supply chain pipeline. This needs to be kept in mind if DOE decides to implement a 45LPW backstop requirement. If many new LED lamps need to be developed to replace incandescent or halogen lamps that do not currently have an LED lamp replacement, there is a high probability that there will be a shortage of products available for consumers if DOE fails to allow adequate time for manufacturers to prepare for the transition.

Issue 5: Given normal stock levels, how long does it take for a store to sell through its inventory of lamps (i.e. from when the lamp arrives at the store to when the store sells it to a customer)?

We agree with the comments submitted by NEMA and would like to reemphasize that a manufacturing date/importation ban is far less problematic for manufacturers and retailers to manage than a sales date ban. Consequently, we urge DOE to seriously consider a manufacturing date/importation ban which will allow us to manage our liabilities and the phase-in of a replacement LED portfolio effectively.

Issue 6: What steps would manufacturers/retailers need to take to avoid stranded inventory for lamps that do not have an efficacy of at least 45 lm/ W? How long would each step take (i.e., how early must a manufacturer/retailer know that a lamp cannot be sold to avoid stranded inventory)?

As previously stated, Signify can support a minimum efficacy requirement of 45 LPW for General Service Lamps provided that we have at least **12 months to implement it from the date of publication of any final rule and that it is implemented initially by a manufacturing date/importation ban**. A sales ban is difficult to implement and requires end-to-end management of stock and components and can



result in high financial liabilities for manufacturers and retailers due to stranded inventory that cannot be sold and must be scrapped and sent to landfills. As pointed out in NEMA's comments to recent GSL rulemakings, EISA 2007 gives DOE the authority to consider a phased-in approach and as such, a manufacturing date/importation ban followed by a retail sales ban would be a more workable approach.

Issue 7: If manufacturers/retailers end up with stranded inventory, what will they do with it (e.g., will it be destroyed or exported)? What are the costs associated with handling the stranded inventory?

We cannot speak for our retail partners, but as a manufacturer, any stranded inventory would most likely need to be scrapped.

END COMMENTS