

**BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION**

<b>IN THE MATTER OF SOFT LIGHTS</b>	)	<b>CASE NO. GNR-E-22-02</b>
<b>FOUNDATION’S PETITION FOR</b>	)	
<b>REGULATION OF LIGHT</b>	)	<b>ORDER NO. 35586</b>
<b>EMITTING DIODE STREETLIGHTS</b>	)	
_____	)	

On July 7, 2022, the Soft Lights Foundation (“SLF”) petitioned the Idaho Public Utilities Commission (“Commission”) to enjoin Idaho electric utilities from installing or selling light emitting diode (“LED”) streetlights until the U.S. Food and Drug Administration (“FDA”) approves related LED regulations. Alternatively, SLF requested that the Commission mandate that Idaho utility companies post warnings on their websites stating: (1) LED lights are not approved or regulated by the FDA, (2) LED light is low quality light that is not energy efficient, and (3) that “LED light has been shown to cause significant negative health effects.” Application at 5-6.

Avista Utilities (“Avista”), Idaho Power Company (“IPC”), and Rocky Mountain Power (“RMP”) have, in turn, taken issue with these claims and generally argued that the Commission is not the proper venue to address them.<sup>1</sup> Additionally, the utilities disagree, from both a factual and policy standpoint, with the merits of SLF’s assertions. The Commission also received one public comment from the United Kingdom describing the Commentor’s LED light disability and opposition to the use of LED lighting.

On September 1, 2022, SLF replied to Idaho Power’s comments.

Having reviewed the record, we now issue this Order declining SLF’s Petition to require Idaho electric utilities to discontinue the use of LED lighting and to post health and safety information to their websites.

**THE PETITION**

SLF alleged that FDA regulation for LED lights lacks clarity and has not been specifically approved of the use of LED streetlights. SLF further alleged that LED light is surface source light as opposed to point source light. SLF stated that surface light that is lower quality and non-uniform, arguing this makes it less desirable for living entities which have evolved to live in point source light. SLF stated that LED light causes or aggravates numerous neurological, vision, and other

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<sup>1</sup> Avista filed comments on August 8, 2022; IPC filed comments on August 26, 2022; RMP filed comments on August 31, 2022.

health conditions. SLF pointed to certain individuals who allege that LED light caused significant detriments in their health and/or lifestyle.

SLF also took issue with claims that LED light is more efficient. SLF argued that for light to be more efficient it must produce the same quality of light with less energy. SLF argued utility companies have made a false equivalence in comparing luminosity<sup>2</sup> with energy efficiency.

SLF also offered several potential rebuttals to counter arguments made by proponents of LED lights. These rebuttals included: (1) arguments that the Illuminating Engineering Society is not studying LED light, and that the American Medical Association (“AMA”) published a 2016 report on the harms of blue wavelength light; (2) utility companies cannot simply claim to be following industry standards when they independently choose what they contribute to their industry—thereby creating those standards; and (3) a utility companies’ potential claim that LED lights provide superior color rendering distracts from the actual issues. SLF further argued that “at night it is psychologically disturbing to see green grass when the surrounding environment is not illuminated by sunlight.” *Id.* at 18. SLF concludes by citing *Idaho Code* §§ 61-302 and 61-334B.<sup>3</sup> SLF argued that these statutes provide the Commission with the authority to grant the relief requested. *Id.* at 19.

## UTILITY RESPONSES

### 1. AVISTA

Avista disagreed that the FDA’s lack of regulation in this area means that the Commission or Avista is operating without FDA approval. Avista argued that the Commission does not have the expertise in this area, and that the proper venue for these concerns was the FDA. Avista acknowledged a lack of expertise as to some of the factual concerns addressed by SLF. However, Avista quoted *5 Common Myths about LED Street Lighting* published by The Office of Energy Efficiency and Renewable Energy (“EERE”) under U.S. Department of Energy.<sup>4</sup> This article argued against the following five alleged myths:

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<sup>2</sup> Relatedly, SLF stated that luminosity is a metric for measuring point source light whereas LED light is surface source light. Relatedly, SLF argued that referring to LED light’s luminosity is uninformed or misleading. *See* Soft Lights Foundation, <http://www.softlights.org/why-dont-leds-save-energy/> (last visited Sept. 28, 2022).

<sup>3</sup> Notably, *Idaho Code* § 61-334B relates to the Electric Supplier Stabilization Act which is designed to “promote harmony among and between electric suppliers furnishing electricity within the state of Idaho” and therefore is not relevant to SLF’s Petition. *Idaho Code* § 61-332(2).

<sup>4</sup> Office of Energy Efficiency & Renewable Energy, <https://www.energy.gov/eere/articles/5-common-myths-about-led-street-lighting> (last visited Sept. 28, 2022).

- [1] LED streetlights are more harmful to humans and animals than other kinds of streetlights... [2] All short-wavelength light is harmful to humans and animals... [3] LED lighting emits more short-wavelength light than do other lighting technologies... [4] Street lighting should never emit any short-wavelength light... [5] Communities are better off with conventional street lighting.<sup>5</sup>

One item the EERE article emphasizes repeatedly (which was also quoted by Avista) is the capability of LED lights to be dimmed according to the needs of the area at various times of the day—thus reducing excess glare and cutting back on skyglow.<sup>6</sup> Also while quoting the article, Avista noted the ability of LED lights to be more narrowly focused on the area that needs illumination.

In response to SLF’s argument that LEDs are not more efficient, Avista points to a separate EERE source that defined efficiency as “the use of less energy to perform the same task or produce the same result.”<sup>7</sup> Avista argued in closing that, in this factual setting, the statutes that SLF points to do not actually enable the Commission to grant the relief that SLF requested.

## 2. ROCKY MOUNTAIN POWER

In its response, RMP summarized SLF’s petition arguing that SLF acknowledged that LED light does not fall under FDA regulation. RMP argued that, if LED light was harmful, the federal government would regulate it universally—instead of leaving regulation up to the states. RMP also directly disagreed with several of SLF’s factual assertions. Specifically, RMP argued that LED light is not low quality and that advancements in LED technology have “addressed the issues with the color spectrum.” RMP response at 3. RMP also argued that SLF’s claims that LED lights are less efficient are inaccurate. RMP stated that LEDs consume up to 50% less energy than high-pressure sodium (“HPS”) lights. RMP also noted that LEDs are easier and less costly to maintain. RMP stated that LEDs do not need internal reflectors or glass covers. RMP further stated LED’s also have a lifespan of 15-20 years (50,000 hours) which is 2-4 times the lifespan of HPS lighting—thus reducing the frequency at which the bulbs need to be replaced and discarded. RMP noted that LEDs can be dimmed and reduce illumination during peak power usage. Transversely, according

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<sup>5</sup> *Id.*

<sup>6</sup> *Id.*

<sup>7</sup> Office of Energy Efficiency & Renewable Energy, <https://www.energy.gov/eere/energy-efficiency#:~:text=Energy%20efficiency%20is%20the%20use,less%20energy%20to%20produce%20goods>. (last visited Sept. 28, 2022).

to RMP, LEDs can also be instantly brought to full illumination—whereas HPS lighting requires a warm-up period. RMP argued that LEDs provide more consistent light output across differing temperatures.

RMP alleged that, while the AMA has guidelines on community implementation, the AMA supports community-based LED lighting.<sup>8</sup> RMP stated that its lighting standards conform with the standards of more than one engineering society, including the National Electrical Manufacture’s Association, as well as the International Dark-Sky Association. Because of LED’s alleged benefits, RMP stated that nearly all new lighting technology is LED, and complete HPS fixtures are no longer available for purchase. For these reasons, RMP disagreed with SLF. On policy and related technological grounds, RMP opposed SLF’s requests to (1) halt or reverse LED streetlight implementation; and (2) post information on its website that RMP believes is false or inaccurate.

### 3. IDAHO POWER

IPC discussed its tariff Schedules—specifically Schedule 15 and Schedule 41 which collectively incorporate about 54,000 streetlights. IPC stated that the Commission previously approved an LED project that is 68% complete. *See* Order No. 34452. IPC also argued that the technological advantages of LED light has led to greater consumer satisfaction. IPC estimated that, once LED streetlights replace the remaining High Intensity Discharge streetlights (when combined with those lights which have already been replaced), the total estimated annual reduction in energy consumption will be about 748,581 megawatt hours. IPC stated that the net power supply expense savings from this conservation will flow back to its customers through the annual Power Cost Adjustment.

IPC claimed that HPS vapor bulbs have an approximate lifespan that is only 20% of analogous LEDs. IPC stated that quality of LED light is better because it is whiter (as opposed to more yellow), has less glare, reduces dark spots, and improves visibility. Additionally, IPC argued that LEDs do not have mercury or lead and are thus more environmentally friendly. IPC argued that that it is unreasonable to have the Commission rule based upon actions that the FDA has not taken—and may never take.

IPC alleged that posting SLF’s concerns onto IPC’s website would only cause confusion, and that streetlights provide a small slice of the average person’s daily LED exposure. IPC does

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<sup>8</sup> Council on Scientific and Public Health Report 2 Recommendations Adopted, page 6 recommendation number 1 line 39.

not support posting information to its website that “it believes to be false.” IPC Response at 7. IPC believes that concerns over health should be directed to the FDA rather than the Commission as the FDA deals more directly with health concerns than the Commission does. IPC believes that posting conclusions as to health, such as those SLF requested, “is premature and possibly misleading.” *Id.*

### **SOFT LIGHTS REBUTTAL OF IDAHO POWER’S RESPONSE**

On September 1, 2022, SLF responded to IPC’s filing. SLF described the FDA’s procedure and stated that IPC “skipped over the entire federal regulatory process” by installing LED streetlights. SLF Rebuttal of IPC at 2. SLF stated that IPC has admitted to limited expertise in this field yet installs LED streetlights without FDA approval. SLF disagreed with IPC’s conclusions as to light quality then reiterated its arguments that, under scientific definitions, LED light is of lower quality. SLF argued that LED light is not white light—but rather blue light—which SLF stated has been shown to be a toxin according to hundreds of studies. SLF linked its claim to the “resources” tab on its website. SLF stated that IPC’s claim that LED light is better quality (because it can more precisely be directed) is “provably false.” *Id.* at 5. SLF stated that LED light is not spatially uniform and can trigger “epileptic seizures, migraines, panic attacks, nausea, and eye injury.” *Id.* SLF stated that IPC’s claims about being in line with industry standards are irrelevant because public health agencies, rather than industry, are responsible for comfort, health, and safety standards.

### **COMMISSION FINDINGS AND DECISION**

The Commission has authority to deny matters requested in this petition under *Idaho Code* §§ 61-501 and 61-503. The Commission has the power to “supervise and regulate every public utility in the state and to do all things necessary to carry out the spirit and intent of the [Public Utilities Law].” *Idaho Code* § 61-501.

SLF argued that LED light is physically harmful to humans and that current industry practices should be stopped accordingly. Although addressed from different perspectives, each utility disputed that any of the alleged health concerns raised by SLF should stop a utility’s implementation of LED streetlights. Each utility also argued that, rather than the Commission, an entity that regulates health related matters, such as the FDA, is the proper venue for these health concerns. The Commission agrees with the utilities that it is not the proper venue for medical

considerations related to LED light in this case.<sup>9</sup> Additionally, the Idaho State Legislature has not granted the Commission authority to make such findings. The Commission thus cannot require Idaho utilities to post information on their websites when such information could be false, and the Commission lacks the qualifications or mandate to determine the information's veracity. The Commission lacks jurisdiction to order Idaho utilities to make such posting. The Commission is unconvinced that it has the statutory authority to weigh in on the specific health issues raised by SLF.

### **ORDER**

IT IS HEREBY ORDERED that SLF's request to require Idaho electric utilities to wait for FDA approval and regulation of LED products prior to the sale or installation of any LED streetlight is hereby DENIED.

IT IS FURTHER ORDERED that SLF's request to require Idaho electric utilities post certain information about LED light on their websites is hereby DENIED.

THIS IS A FINAL ORDER. Any person interested in this Order may petition for reconsideration within twenty-one (21) days of the service date of this Order regarding any matter decided in this Order. Within seven (7) days after any person has petitioned for reconsideration, any other person may cross-petition for reconsideration. *See Idaho Code* § 61-626.

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<sup>9</sup> SLF has argued that Idaho utilities are required to promote the "safety, health, [and] comfort" of the public. *Idaho Code* § 61-302. SLF therefore contends that the Commission has the authority to determine medical and health matters. The Commission and analogous municipal entities do regulate health and safety concerns such as water quality. These governing bodies have a great deal of discretion when determining what actions they must take to promote health and safety. *See Lamont Bair Enterprises, Inc. v. City of Idaho Falls*, 165 Idaho 930, 937, 454 P.3d 572, 579 (2019).

DONE by Order of the Idaho Public Utilities Commission at Boise, Idaho this 4<sup>th</sup> day of November 2022.



ERIC ANDERSON, PRESIDENT

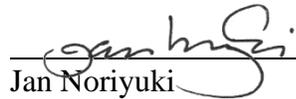


JOHN CHATBURN, COMMISSIONER



JOHN R. HAMMOND JR., COMMISSIONER

ATTEST:



Jan Noriyuki  
Commission Secretary

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