

STATE OF NEW YORK  
PUBLIC SERVICE COMMISSION

At a session of the Public Service  
Commission held in the City of  
Albany on November 13, 2025

COMMISSIONERS PRESENT:

Rory M. Christian, Chair  
James S. Alesi  
David J. Valesky  
John B. Maggiore  
Uchenna S. Bright  
Denise M. Sheehan  
Radina R. Valova

CASE 23-E-0727 - Complaint of MarieAnn and Richard Cherry and  
Others Concerning LED Street Lights in the  
Village of Cambridge.

ORDER DENYING PETITION

(Issued and Effective November 14, 2025)

BY THE COMMISSION:

INTRODUCTION

In December 2019 and January 2020, Niagara Mohawk Power Corporation d/b/a National Grid (National Grid or Company) converted the streetlighting luminaires in the Village of Cambridge, Washington County (Village) from high pressure sodium (HPS) to light emitting diode (LED) technology. The Village requested the change to take advantage of the energy efficiency characteristics of LEDs.<sup>1</sup>

After conversion from HPS to LED streetlight luminaires, National Grid and the Village received complaints that a Village resident (Resident) suffering from photosensitive

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<sup>1</sup> See Case 23-E-0727, Response of the Village of Cambridge (filed April 29, 2022).

epilepsy experienced increased seizures caused by the installed LEDs. After consultation with National Grid, the Village converted five of the LED streetlight fixtures in proximity to the Resident's home back to HPS luminaires to accommodate the Resident's concerns.<sup>2</sup>

On December 13, 2021, 52 National Grid customers (Petitioners) filed a petition (Petition) to the Public Service Commission (Commission) to require that National Grid remove and replace all of the LED streetlights in the Village with HPS fixtures, lower the heights of the streetlight fixtures to less than 20 feet above the ground, and take any further unspecified steps to eliminate overnight light trespass from streetlights into houses.<sup>3</sup>

Pursuant to Public Service Law (PSL) §71, Department of Public Service staff (Staff) commenced an investigation into the Petition's allegations. On January 23, 2024, Staff issued a report concluding that the LED fixtures in question meet all government requirements and that National Grid's actions were consistent with its tariff. Based on these facts, Staff concluded that the Commission should deny the Petition because there is no basis for requiring National Grid to take the actions requested in the Petition.<sup>4</sup> By this Order, the Commission denies the relief requested in the Petition.

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<sup>2</sup> Case 23-E-0727, Complaint of Richard Cherry (filed June 3, 2022).

<sup>3</sup> Case 23-E-0727, Complaint Concerning LED Street Lights (filed December 13, 2021); Case 23-E-0727, Public Service Signatures (filed December 13, 2021).

<sup>4</sup> Case 23-E-0727, Department of Public Service Staff Report Regarding LED Streetlight Complaint (filed January 23, 2024).

BACKGROUND

Following receipt of the Petition, the Secretary to the Commission issued a Notice of Investigation and Inviting Comments requesting comments by June 3, 2022.<sup>5</sup> National Grid and the Village submitted responses. Additionally, numerous interested persons filed comments. The responses of National Grid and the Village are discussed immediately below. The comments are discussed later in this Order, together with comments received at later stages of this proceeding.

Response of the Village of Cambridge

The Village submitted a response to the Petition on April 29, 2022 (Village Response).<sup>6</sup> The Village states that it received a letter from the Resident's doctor stating that the Resident suffers from diagnosed photosensitive epilepsy.<sup>7</sup> The Village states that the Resident's family requested the removal of all of the LED streetlights in the Village.<sup>8</sup> The Village states that the Resident did not present evidence that their number of seizures had increased, that any increase in seizures was caused by the installed LED fixtures, or that the height of streetlight fixtures had changed.<sup>9</sup> To accommodate the Resident, the Village had National Grid replace five LED light fixtures in proximity to the Resident's property with HPS fixtures.<sup>10</sup> The Village stated that this action was a short-term remedy because HPS fixtures are no longer stocked by National Grid and in-

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<sup>5</sup> Case 23-E-0727, Notice of Investigation and Inviting Comments (filed March 29, 2022).

<sup>6</sup> Response of the Village.

<sup>7</sup> Id., p. 2.

<sup>8</sup> Id.

<sup>9</sup> Id., p. 3.

<sup>10</sup> Id.

service HPS fixtures will be replaced by LED fixtures when they fail.<sup>11</sup>

The Village requested a study of LED and HPS lighting by the Lighting Research Center of the Rensselaer Polytechnic Institute (RPI).<sup>12</sup> In its July 10, 2020 report, RPI concluded that the streetlight LED luminaires in the Village were “not a likely factor in the potential to experience photosensitive seizures”, as they produced very little flicker compared to the HPS lights they replaced.<sup>13</sup>

The Village states that the LED fixtures installed are consistent with the current guidelines of the Department of Transportation and the American Medical Association (AMA).<sup>14</sup> The Village also argues that “the outdoors, specifically during the hours when illuminated by streetlights, is not a place of public accommodation” as defined by New York Executive Law §292(9).<sup>15</sup> The Village argues that no reasonable modification exists because the Petitioners want all LED lighting removed from the Village, which would completely reverse the Village’s energy efficiency efforts.<sup>16</sup> The Village argues that the increased presence of LED lights generally present in everyday life renders the Petitioners’ proposed remedy “ineffective,” and that the Village has already accommodated the Resident by replacing the LED streetlights around their home with HPS fixtures.<sup>17</sup> Finally, the Village states that the Resident argues discrimination under the Americans with Disabilities Act (ADA),

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<sup>11</sup> Id., p. 2.

<sup>12</sup> Id., pp. 2.

<sup>13</sup> Id., Attachment E, pp. 29-33.

<sup>14</sup> Id., p. 6.

<sup>15</sup> Id., p. 4.

<sup>16</sup> Id.

<sup>17</sup> Id., p. 5.

for which the Resident filed a complaint with the office of the Attorney General alleging that the Village discriminated against them due to a disability. The Office of the Attorney General found no pattern of discrimination and directed the Resident to the New York State Division of Human Rights (NYSDHR), the findings of which are discussed below.<sup>18</sup>

Response of National Grid

National Grid submitted a response to the Petition on April 29, 2022. National Grid states that it supplies the Village with streetlighting under its Service Classification 2 (SC-2), which involves utility-owned and maintained streetlights, and that it converted HPS fixtures to LED at the Village's request.<sup>19</sup> National Grid cites the findings in the RPI report regarding LED flicker and its alleged relationship to the Resident's seizures. RPI found that the installation of LED streetlights in Cambridge Village resulted in a substantial reduction in flicker compared to the previous HPS lights.<sup>20</sup> National Grid states that it converted five fixtures near the Resident's home back to HPS at the Village's request.<sup>21</sup>

National Grid explains that in July 2021, the Resident filed a complaint with the NYSDHR asserting disability discrimination by public accommodations, meaning the LED streetlights.<sup>22</sup> National Grid states that it and the Village have provided a reasonable solution to the Resident's complaints by replacing five LED light fixtures in proximity to their home

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<sup>18</sup> Id., pp. 2-3.

<sup>19</sup> Case 23-E-0727, Response of National Grid (filed April 29, 2022)

<sup>20</sup> Id., p. 4.

<sup>21</sup> Id.

<sup>22</sup> Id., p. 5.

with HPS fixtures.<sup>23</sup> National Grid states further that converting all streetlighting fixtures in the Village to HPS is not viable because LED fixtures are becoming the industry norm and because of the growing scarcity of HPS fixtures. More generally, National Grid argues that the Village is its customer for streetlighting, not the Resident or Petitioners, and that it complied with the Village's requests and the terms of its tariff in converting the streetlighting to LED fixtures. National Grid notes that, per its tariff, fixtures that National Grid needs to replace due to failure for SC-2 customers are converted to LEDs.<sup>24</sup> National Grid argues that the Village should not be required to restore HPS fixtures given the increased operating cost and their growing obsolescence.<sup>25</sup> Regarding the Petitioners' request to lower the height of the fixtures, National Grid states that the height of the fixtures is determined by its standards, which consider electrical and safety factors.<sup>26</sup>

Department of Public Service Staff Report

Staff submitted a report on January 23, 2024, regarding the allegations raised in the Petition.<sup>27</sup> Staff evaluated the Petitioners' complaint and concluded that several federal agencies regulate aspects of LED lighting and that the LED fixtures used by National Grid comply with all federal statutes and regulations. The Commission regulates the interactions between a utility and its customer for a given

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<sup>23</sup> Id., p. 6.

<sup>24</sup> Niagara Mohawk Power Corporation PSC No. 214, Electricity, Service Classification No. 2, Leaf 31.

<sup>25</sup> Response of National Grid, p. 8.

<sup>26</sup> Id., p. 6.

<sup>27</sup> Case 23-E-0727, Department of Public Service Staff Report Regarding LED Streetlight Complaint (filed January 23, 2024).

service. As a regulated utility, National Grid is required to follow the provisions of its tariff. Here, National Grid's customer is the Village. The Village can choose the service it wants to receive from National Grid within the confines of National Grid's tariff. At the request of the Village, National Grid installed LED luminaires listed under and pursuant to its Commission-approved tariff. Staff concluded that the Village is not objecting to the service provided by National Grid, that National Grid acted within the confines of its tariff, and that the LED streetlights installed in the Village meet all federal and state requirements. Accordingly, Staff recommended that the Commission deny the Petition.<sup>28</sup>

#### NOTICE OF PROPOSED RULEMAKING

Following the issuance of the Staff Report and pursuant to the State Administrative Procedure Act (SAPA) §202(1), a Notice of Proposed Rulemaking was published in the State Register on February 7, 2024 [SAPA No. 23-E-0272SP1]. The time for submission of comments pursuant to the Notice expired on April 7, 2024. Additionally, on January 25, 2024, the Secretary to the Commission issued a Notice Soliciting Comments, scheduling a public statement hearing and requesting comments by May 1, 2024.<sup>29</sup> On April 17, 2024, a public statement hearing was held.<sup>30</sup> On May 23, 2024, the Secretary to the Commission considered a request for an extension of time to submit comments on the Staff Report and encouraged that comments be filed by or

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<sup>28</sup> Staff Report, p. 9.

<sup>29</sup> Case 23-E-0727, Notice Soliciting Comments (filed January 25, 2024).

<sup>30</sup> Case 23-E-0727, Public Statement Hearing Transcript - April 17, 2024 (filed April 30, 2024).

before June 7, 2024.<sup>31</sup> The comments received pursuant to the Notices are discussed below.

#### PUBLIC COMMENTS

The Commission received almost 300 public comments regarding the Petition and the Staff Report. Those submitting comments included the Resident and their family, other residents of the Village, and interested persons and entities outside of the Village and outside of New York State.

Comments from the Resident and their family include: a report of the processes used by local governments in Great Britain before installing LED lights, a list of individuals reporting negative effects from LED lighting, a list of quotes from other individuals reporting similar negative effects, a list of studies on photosensitive epilepsy, and interview about the benefits of infrared radiation, various articles and letters to the editor about the negative effects of LED lighting, a summary of their interactions with the Village and National Grid prior to filing the Petition, letters from the Soft Lights Foundation to National Grid, a letter from advocates regarding the dangers of LED light use, a summary of an Epilepsy Foundation of America article, an abstract of an article on the effects of uncontrolled epilepsy, and numerous other filings.

Many of the Resident's friends and relatives state their support of the effort to remove LED streetlights from the Village. Some of these persons describe their experiences witnessing the Resident's seizures and assert that installation of streetlight LED luminaires in the Village caused an increase in seizure frequency. Other persons complain of their own experience of neurological sequelae from exposure to the LED

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<sup>31</sup> Case 23-E-0727, Ruling on Extension Request (filed May 23, 2024).

streetlights in the Village. Comments from residents of the Village assert that the installed LEDs are intrusive, obnoxious, or glaring in their brightness. Other residents comment that they also experience physical side effects from the installed LED luminaires, such as headaches, poor concentration, and seizures. Commenters from outside of the Village and outside of New York State similarly assert ill-effects from LEDs, displeasure with the appearance of LEDs, or a resulting need to avoid driving at night or travelling to locations where LEDs are in use. The comments consistently assert that exposure to LEDs, whether in the Village or outside of it, led to negative effects and a change in daily activities.

Finally, the Commission received many comments from Mark Baker of the Soft Lights Foundation, which advocates against the replacement of any incandescent light fixtures with LEDs. Mr. Baker states that he experienced negative physical effects from LED lights, which led him to move to a state where they are less prevalent. Mr. Baker argues that LED light is harmful to people and not a comparable replacement for incandescent lighting. The Soft Lights Foundation also argues that the use of LED streetlighting is a violation of the ADA because accommodations are not made for individuals who claim to experience harmful effects. The Soft Lights Foundation's filings consist largely of articles related to LED lighting and its alleged harmful nature, and petitions that the Soft Lights Foundation has made to various regulatory agencies regarding LED lighting. Mr. Baker comments that LEDs are dangerous and have not been vetted properly for public use. Mr. Baker comments that National Grid failed to comply with 16 NYCRR §125.3 by failing to maintain records related to the Resident's reported injuries suffered by exposure to the LEDs in the Village. Mr. Baker comments that LED lights do not have energy efficiency

characteristics as compared to HPS lights. Mr. Baker comments that the Resident and their friends and family have made numerous statements attesting that the installed LED lights led to increased seizure activity that reduced after five streetlights surrounding the Resident's home were reverted to HPS lights, and that these statements objectively establish both an increase in the Resident's seizures and a causal relationship with the installed LED lights. Finally, Mr. Baker comments that he filed a federal lawsuit on January 22, 2024, against the Federal Food and Drug Administration (FDA) to compel the FDA to publish what he deems to be "Congressionally mandated" performance standards for LED products. Mr. Baker argues that said lawsuit must be considered by the Commission in its resolution of the Petition.

On April 17, 2024, DPS Administrative Law Judge Tara Kersey held a virtual Public Statement Hearing, which allowed participants to make public statements electronically or telephonically.<sup>32</sup> In commentary at the hearing, the Resident stated that installed LED lights in the Village caused and continued to cause them adverse health effects, and that National Grid's replacement of five LED lights around their home with HPS lights comprised less than two percent of the Village's street lit area. The Resident argued that tariffs and regulations do not override a person's right to travel public streets and sidewalks without the threat of harm from public infrastructure and without a utility company's interference upon how a person conducts their life.<sup>33</sup>

The Public Statement Hearing additionally yielded comments in support of the Petition requesting that the

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<sup>32</sup> Case 23-E-0727, Public Statement Hearing Transcript - April 17, 2024 (filed April 30, 2024), pp. 1, 5.

<sup>33</sup> Id., pp. 7-11.

Commission order National Grid to revert all Village streetlight fixtures to HPS. Some residents of the Village stated that their own photosensitive epilepsy left them unable to tolerate exposure to LEDs without experiencing seizures. They stated that harmful seizures and other effects from streetlight LEDs prevent nighttime driving and additionally asserted that the prevalence of LEDs in many facets of public life, such as in grocery stores, medical offices, emergency vehicles, and pedestrian crossings, make it difficult to run errands or travel even during the day.<sup>34</sup> Statements also regarded assertions that LEDs trigger light-induced migraines that impair their ability to concentrate and function professionally.<sup>35</sup>

John Lincoln, who is a trustee of the Scottish charity LightAware, stated that his research into negative health effects from LEDs indicated that people who suffer such effects tend to be ignored or disbelieved by medical professionals and public engineers, which leads to social exclusion from public streets, public buildings, stores, and schools.<sup>36</sup>

Mark Baker, president of the Soft Lights Foundation, stated that LEDs are "well established" as hazardous and argued that they are dangerous, discriminatory, and unsafe because their visible radiation causes neurological sequelae as well as increased risks of mental and other health disorders. Mr. Baker argued that National Grid violated its tariff because the installed LED lights are unsafe. Mr. Baker argued that the Federal Highway Administration and the Department of Energy both

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<sup>34</sup> Id., pp. 12-19.

<sup>35</sup> Id., pp. 15-16, 24-26, 30-31, 32-33, 34-35.

<sup>36</sup> Id., pp. 20-23.

promote the use of LED lights but that the U.S. Access Board<sup>37</sup> and the FDA have not published performance standards for LED streetlights. Mr. Baker argued that the FDA has not published performance standards for LED streetlights, that such publication is required by federal law, and that the FDA has not authorized National Grid to sell, install, or operate LED streetlights. Mr. Baker argued that the U.S. Access Board has not published any guidelines for streetlights and that it has deferred to the FDA for publication of health and safety standards. Mr. Baker argues that National Grid's alteration in switching streetlights from HPS bulbs to LEDs violated the ADA in making street and sidewalk services no longer readily accessible or useable by certain individuals with disabilities.<sup>38</sup>

#### LEGAL AUTHORITY

Pursuant to PSL §5, 65, and 66, the Commission has general supervision over electric corporations, must ensure that the service they provide is safe and adequate, and has the authority to require reasonable improvements, when warranted. Pursuant to PSL §71, upon a written complaint of 25 or more customers the Commission will investigate the complaint. Pursuant to PSL §72, following from a complaint filed in accordance with PSL §71, and after an investigation, the Commission may require the utility to make reasonable improvements to its operations.

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<sup>37</sup> The U.S. Access Board is an independent federal agency that develops and maintains design criteria for the built environment, transit vehicles, public right-of-way, information and communication technology, and medical diagnostic equipment under the ADA and other laws, <https://www.access-board.gov/about> (accessed October 29, 2025).

<sup>38</sup> Public Statement Hearing Transcript, pp. 26-29.

### DISCUSSION

The Commission has limited authority in this matter. The Commission regulates National Grid and ensures the Company's compliance with its tariff and in its interactions with its customers. The Commission has no direct authority over the decisions made by the Village, which is National Grid's customer, or other third parties. The Commission has considered National Grid's actions in addressing the Village's request for LED streetlighting. The Commission reviewed the comments received in this case and posed at the Public Statement Hearing. While this Order addresses the relevant comments, the Commission notes that many of these comments address issues, such as non-streetlighting LEDs or light pollution, which are beyond the scope of the Commission's authority. Ultimately, the Commission finds that there is no basis for requiring National Grid to remove the LED streetlights in the Village, replace them with HPS streetlights, or to lower the streetlights to less than 20 feet above the ground.

#### The LED Streetlights and National Grid's Related Actions Comply with National Grid's Tariff and the Commission's Regulations

##### 1. National Grid Tariff

The Commission regulates the interactions between a utility and its customer for a given service. As a regulated utility, National Grid is required to follow the provisions of its tariff. Here, National Grid's customer is the Village. The Village can choose the service it wants to receive from National Grid within the confines of National Grid's tariff. At the request of the Village, National Grid installed LED luminaires listed under and pursuant to its Commission-approved tariff. Apart from five streetlights in proximity to the Resident's home, the Village has not asked National Grid to revert its streetlight luminaires from LED to HPS fixtures.

National Grid's SC-2 identifies the options, rules, regulations, and rates for public roadway and outdoor lighting owned and maintained by National Grid.<sup>39</sup> National Grid has Commission-approved tariffs for LED roadway luminaires ranging from 25 Watts to 210 Watts.<sup>40</sup> National Grid also offers decorative LED fixtures within similar wattage ranges.<sup>41</sup> Under the tariff, the customer-municipality, in this case the Village, determines what type and size of fixture should be installed for each location, and National Grid installs the selected fixtures. The LED offerings that National Grid currently makes available to the Village are listed in the tariff.<sup>42</sup> While at the time the Village had National Grid convert its streetlights from HPS to LED fixtures the available options were more limited, National Grid now offers 3000 kelvin LED options,<sup>43</sup> in addition to 4000 kelvin LED options. These additional offerings allow SC-2 customers, including the Village, to refine their street lighting selection to better suit their lighting preferences and area needs. Thus, the Village, as the customer of National Grid can choose to replace the existing LED fixture with other available options. However, we note that there can be costs the Village may incur were it to request that currently operational fixtures be replaced.<sup>44</sup> That decision is one for the Village, as the customer, to make.

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<sup>39</sup> Niagara Mohawk Power Corporation PSC No. 214, Electricity, Street, Highway, Roadway and Other Lighting, Leaf 4.

<sup>40</sup> PSC No. 214, Leaf 28.1.

<sup>41</sup> Id.

<sup>42</sup> PSC No. 214, Leaves 31-31.1.

<sup>43</sup> The kelvin light scale measures light appearance with warm color (having an orange appearance) characteristics at the low end of the scale and cool color characteristics (having a blue appearance) at the high end of the scale.

<sup>44</sup> See PSC No. 214, Leaves 42-43.1.

2. Regulation Regarding Records of Injuries, 16 NYCRR § 125.3

Some commenters allege that National Grid has not complied with 16 NYCRR §125.3 because it has not maintained records related to the Resident's reported injuries allegedly suffered due to exposure to the LED streetlights in the Village. Sixteen NYCRR §125.3 requires electric corporations and municipalities to record the date, time, and location of electric service accidents and injuries; the nature, extent, and the cause of injury; descriptions of the accident and its cause; and the status and medical prognosis (if available) of an injured party. Mr. Baker comments that the Resident and their friends and family submitted multiple statements attesting that the LED streetlights in the Village led to increased seizure activity, which reduced after five streetlights surrounding the Resident's home were reverted to HPS fixtures. Mr. Baker argues that these statements objectively establish injuries under 16 NYCRR §125.3 and a causal relationship with the installed LEDs. While the Commission acknowledges that these statements have been made to National Grid, they do not constitute evidence to establish that the alleged injury was caused by the LED streetlights. E-mail conversations between the Village and National Grid in January 2021 and February 2021 discuss that the Resident asserted there was no need to provide any such substantiating medical evidence.<sup>45</sup> Apart from a statement from the Resident's doctor citing a diagnosis of underlying photosensitive epilepsy, there is no indication of any medical evidence submitted to National Grid, the Village, or in this proceeding to objectively document or confirm that the Village's switch to LED streetlight fixtures caused the Resident injury, harm, or material causal change in their underlying condition.

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<sup>45</sup> See Response of the Village, p. 67.

The LED Streetlights in the Village Have Less Flicker than the HPS Streetlights They Replaced

On July 10, 2020, the Lighting Research Center of RPI published a report of its study of the flicker from the LED luminaires in the Village as compared to the replaced HPS lights. National Grid replaced the 70-Watt HPS luminaires with 24-Watt LED fixtures, resulting in "substantial" energy savings for the Village. Per the report, individuals with photosensitivity can experience resulting epilepsy with peak sensitivity to flickering light at a frequency of 15 to 20 Hertz. Some individuals also appear photosensitive to flicker at ranges as high as 100 Hertz. The U.S. electrical power grid uses alternating current (AC) that can result in light sources producing some degree of flicker at a frequency of 120 Hertz. Light modulating in the range near 100 Hertz is not directly visible to most people but can lead to increased headaches in workers under such lighting. Both increased headaches and photosensitive epilepsy appear to be affected by flicker in the lighted environment.<sup>46</sup>

RPI visited the Village and measured modulation in one of the installed LED streetlights. RPI additionally measured an HPS bulb in Troy, NY, of the type originally present in the Village. RPI performed both tests after 9:30 p.m., to minimize the amount of ambient light from the sky, and only when no approaching vehicles were present. Measurements showed "substantially" less flicker in the installed LED luminaire, which had no more than three percent flicker and 0.01 Flicker Index compared to the HPS fixture's more than 65 percent flicker and more than 0.18 Flicker Index. The findings matched the testers' subjective experience under each streetlight, as the

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<sup>46</sup> Case 23-E-0727, Response of the Village (filed April 29, 2022), Exhibit E, p. 29.

testers detected multiple images of waving fingers under the HPS light and no such images under the LED luminaire.<sup>47</sup>

Based upon the study, RPI concluded it "unlikely that the flicker from the currently installed LED streetlighting in the Village of Cambridge is a major factor underlying photosensitive seizures that individuals might experience", as installation of the LEDs resulted in "substantial" reduction in flicker compared to previous HPS lights. RPI stated that some LEDs can have a more noticeable flicker than HPS streetlights but that the electronic driving circuits appear to "smooth" AC power to provide a "constant" current level to the LEDs. RPI stated that flicker is the "most likely" factor that could influence photosensitive epilepsy but that differences in color between LED and HPS streetlights could be a factor. However, the differences between the measured lights "are relatively small" and "unlikely" to influence photosensitive epilepsy because "other light sources with colors similar to the white illumination as the LED streetlights are used throughout the indoor and outdoor lighted environment, including incandescent, fluorescent, metal halide and mercury vapor lamps."<sup>48</sup>

The LED Streetlights in the Village Comply with All Existing Standards

The Petitioners argue that National Grid violated its tariff when it complied with the Village's request to replace the HPS streetlight luminaires with LED fixtures. The Petitioners argue that LEDs are harmful to people, wildlife, and the environment, and that the LEDs in question cause overnight light trespass into homes, cause negative health effects in residents, and deprive certain residents with a disability of

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<sup>47</sup> Id., pp. 30-31.

<sup>48</sup> Id., p. 32.

the right to use the Village's streets and sidewalks while the LEDs are alight.

The Commission considered the Resident's complaint, the Petition, and commentary from Village residents and other commenters. The Commission reviewed the relevant State and Federal statutes and regulations regarding LED streetlighting. Several federal agencies regulate aspects of LED lighting, including the Department of Energy (DOE), the FDA, and the Federal Highway Administration (FHWA). While the Petitioners argue that the LED luminaires in the Village are hazardous, the LED luminaires in question meet all current federal and state requirements.

### 3. Department of Energy Solid-State Streetlighting Standards

The DOE founded the Municipal Solid-State Street Lighting Consortium (Consortium) in 2010.<sup>49</sup> Solid-state streetlighting fixtures are those that use LEDs as an illumination source. Although no longer active, the Consortium was a conglomerate of nearly 500 utilities, municipalities, and other agencies working together to create field experience and data to accelerate the learning curve for buying and implementing the conversion to LED streetlighting.<sup>50</sup>

Lighting standards are generally set by working groups of industry participants. A number of engineering organizations facilitated the research, design, and implementation of industry

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<sup>49</sup> <https://www.energy.gov/eere/ssl/doe-municipal-solid-state-street-lighting-consortium>(accessed October 29, 2025).

<sup>50</sup> Id.

best practices.<sup>51</sup> These organizations propagate standards related to all attributes of solid-state lighting, such as ideal lumen output, foot candle and lux, glare, lumen maintenance and efficacy, safety, height of streetlight poles, and voltage. The American National Standards Institute (ANSI) issued the most recent update to industry standards for roadway lighting in July 2022.<sup>52</sup> National Grid implements ANSI's recommended industry best practices.<sup>53</sup>

#### 4. Federal Highway Administration

FHWA regulations dictate on-the-ground illumination guidelines and best practices for LED streetlights, including height and kelvin temperature of roadway lighting installations. As stated by the FHWA, "Lighting of pedestrian facilities plays a key role in increasing the safety performance of the road network for all users."<sup>54</sup> In 2020, the FHWA released a report titled "Street Lighting for Pedestrian Safety."<sup>55</sup> The report provides a synopsis and recommendations following a

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<sup>51</sup> Industry participants include the National Electrical Manufacturers Association, American National Standards Institute (ANSI), Illuminating Engineering Society (IES), Institute of Electrical and Electronics Engineers, Illuminating Engineering Society of North America, and Underwriters' Laboratories.

<sup>52</sup> ANSI/IES RP-8-22 takes an expansive and comprehensive approach toward making roadway lighting suitable to assure public safety, <https://blog.ansi.org/?p=160622> (accessed October 29, 2025).

<sup>53</sup> [https://www.nationalgridus.com/media/pronet/constr\\_esb750.pdf](https://www.nationalgridus.com/media/pronet/constr_esb750.pdf) (accessed October 29, 2025).

<sup>54</sup> Federal Highway Safety Administration, Lighting for Pedestrian Safety (2022), <https://highways.dot.gov/media/20756> (accessed October 29, 2025).

<sup>55</sup> Federal Highway Safety Administration, Research Report: Street Lighting for Pedestrian Safety (2020), <https://highways.dot.gov/sites/fhwa.dot.gov/files/2022-09/StreetLightingPedestrianSafety.pdf> (accessed October 29, 2025).

demonstration study of LED streetlights within various conditions. The project objectives were: (1) to evaluate the visibility of child-sized pedestrians alongside a lighted roadway at night, (2) to evaluate the visibility of trip hazards in a lighted crosswalk at night, and (3) to assess the impact of roadway lighting on the decision to cross a roadway. The report highlighted that urban environments warrant different lighting designs compared to rural environments. The report found that 2200 kelvin fixtures were not satisfactory to meet lux and illuminance standards for pedestrian traffic and recommended that the color temperature of the light source should be 3000 kelvin or higher in all environments.<sup>56</sup>

#### 5. Food and Drug Administration

The Soft Lights Foundation has submitted comments in which it argues that LED lighting fixtures are subject to regulation by the FDA pursuant to the Radiation Control for Health and Safety Act of 1968, which concerns the regulation of electromagnetic radiation from electronic products. The Soft Lights Foundation argues that since the FDA has not to date issued regulations regarding LED lighting fixtures, it is unlawful to use them in streetlighting. The Soft Lights Foundation also filed a petition with the FDA requesting that the FDA issue regulations for LED lighting.<sup>57</sup>

The FDA's Center for Devices and Radiological Health (the Center) is responsible for regulating radiation-emitting electronic products. The Center's goal is to protect the public from hazardous and unnecessary exposure to radiation from

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<sup>56</sup> Id.

<sup>57</sup> Docket No. FDA-222-P-1151, Citizen Petition from Soft Lights Foundation (filed June 14, 2022), <https://www.regulations.gov/document/FDA-2022-P-1151-0001> (accessed October 29, 2025).

electronic products. For most electronic products, safety regulation is divided between the Center and state regulatory agencies. The Center regulates the manufacture of the products, and the states regulate the use of the products. As of October 2025, LED technology is not listed as a regulated product on the FDA's website.<sup>58</sup>

DPS Staff contacted the Center via e-mail to verify its understanding of FDA's regulation of LED streetlights. In its response, The FDA explained that in 1968, Congress authorized the FDA to study the electronic product industries and, through the Center, to promulgate standards for any device it determined to be particularly hazardous to the American Public.<sup>59</sup> As of 2022, the FDA had not determined that the LED industry poses a significant hazard. The FDA noted that it continues to monitor the industry and collect data, such as monitoring all LED shipments entering the country. However, there is no evidence to indicate that the FDA determined that LED lights were particularly hazardous.

Additionally, on May 29, 2024, the FDA issued a response to the petition of Soft Lights Foundation and explained that it is not required to prescribe performance standards to control electronic product radiation emitted by LEDs.<sup>60</sup> The FDA concluded that Soft Lights Foundation had provided insufficient evidence that requested performance standards are necessary for

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<sup>58</sup> <https://www.fda.gov/radiation-emitting-products/radiation-emitting-products-and-procedures/z-list-regulated-products-procedures> (accessed October 29, 2025).

<sup>59</sup> See E-mail exchange in Department of Public Service Staff Report, Appendix, pp. 11-15.

<sup>60</sup> Docket No. FDA-222-P-1151, Final Response Letter from FDA CDRH to Soft Lights Foundation (issued May 29, 2024), <https://www.regulations.gov/document/FDA-2022-P-1151-0215> (accessed October 29, 2025).

the protection of public health and safety.<sup>61</sup> Finally, the FDA found no scientific literature demonstrating a need for regulations to control electromagnetic radiation in the visible portion of the spectrum emitted by products that use LEDs to protect public health and safety.<sup>62</sup>

Finally, Mr. Baker comments that he filed a federal lawsuit on January 22, 2024, against the FDA to compel the FDA to publish what he deems to be "Congressionally mandated" performance standards for LED products. On September 16, 2025, a United States Magistrate Judge recommended to the District Court that Mr. Baker's complaint be dismissed for lack of standing.<sup>63</sup> At present, the matter remains undecided, and the existence of the lawsuit itself is not relevant to this Order.

At this time, the FDA has not issued its own standards regarding electromagnetic emissions from LED light sources. Further, the FDA has found no scientific literature demonstrating a need for regulations to control electromagnetic radiation in the visible portion of the spectrum emitted by products that use LEDs to protect public health and safety. Therefore, the Commission rejects the argument of Mr. Baker that the fact the FDA has not published performance standards presents any bar to National Grid's installation of LED streetlights in the Village.

#### 6. American Medical Association

The Village has argued that LEDs installed by National Grid are consistent with current guidelines from the AMA.<sup>64</sup> On June 4, 2016, the AMA issued a press release regarding its

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<sup>61</sup> Id.

<sup>62</sup> Id.

<sup>63</sup> Baker v. United States Food & Drug Admin., No. 2:24-CV-02558-DC-SCR, 2025 WL 2654133, at \*1 (E.D. Cal. Sept. 16, 2025).

<sup>64</sup> Response of the Village, p. 6.

adoption of guidance from the Council on Science and Public Health to reduce harm from high intensity streetlights.<sup>65</sup> In its press release, the AMA stated, "Strong arguments exist for overhauling the lighting systems on U.S. roadways with [LEDs], but conversions to improper LED technology can have adverse consequences."<sup>66</sup> The adopted guidance from the Council on Science and Public Health explained that LED lighting is available in various color correlated temperatures, and that many early designs of white LED lighting generated a color spectrum with excessive blue wavelength light.<sup>67</sup> As of 2016, first-generation LEDs were 4000 kelvin, of which 29 percent of spectrum lighting is blue light. Daylight levels are equivalent to 6500 kelvin and standard HPS lighting is 2100 kelvin. By 2016, recently engineered LED lighting was available at 3000 kelvin or lower with only 21 percent of its emissions in the blue-appearing part of the spectrum.<sup>68</sup> The AMA stated that first generation "blue-rich" LED lighting can worsen nighttime glare compared to conventional lighting, can decrease visual acuity and safety, can suppress melatonin, can disrupt human circadian rhythm during night, and can disrupt many animal species that need a dark environment.<sup>69</sup> For these reasons, the AMA stated that it "adopted guidance for communities on selecting among LED

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<sup>65</sup> American Medical Association Press Release, <https://www.ama-assn.org/press-center/ama-press-releases/ama-adopts-guidance-reduce-harm-high-intensity-street-lights> (accessed October 29, 2025).

<sup>66</sup> Id.

<sup>67</sup> Human and Environmental Effects of Light Emitting Diode (LED) Community Lighting, <https://www.ama-assn.org/sites/ama-assn.org/files/corp/media-browser/public/about-ama/councils/Council%20Reports/council-on-science-public-health/a16-csaph2.pdf> (accessed October 29, 2025).

<sup>68</sup> Id.

<sup>69</sup> American Medical Association Press Release.

lighting options to minimize potential harmful human and environmental effects.”<sup>70</sup>

Whether discussing first generation LEDs or then-newly available warmer spectrum LEDs in 2016, neither the AMA press release nor its adopted guidance on LEDs acknowledge any neurological sequelae from LEDs, such as migraines or seizures. In 2017, the AMA issued a guide titled “Lower Costs by Going Green,” which encouraged its own member medical practices to replace their old light bulbs with energy efficient alternatives that include LEDs.<sup>71</sup> As of April 19, 2022, the AMA continued to cite to this guidance.<sup>72</sup>

Thus, the LED streetlights installed in the Village reflect guidance from the AMA. Moreover, as noted above, to the extent it decides to do so, the Village, as National Grid’s customer, can request that National Grid replace the existing LED streetlights with fixtures that emit 3000 kelvin light. National Grid’s Installation of LED Streetlights does not Constitute Discrimination on the Basis of Disability

The Petition alleges the use of LED streetlights in the Village of Cambridge is a discriminatory practice based on its alleged effects on the Resident. The Petition refers to the ADA, and we note that the substantive claim was also raised with the NYSDHR, pursuant to the New York State Human Rights Law. As discussed below based on the information provided in this proceeding, we cannot conclude that National Grid has engaged in a discriminatory practice or that the Petition’s requests would

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<sup>70</sup> Id.

<sup>71</sup> <https://www.ama-assn.org/sites/ama-assn.org/files/corp/media-browser/public/ps2/transition-green-physician-practice.pdf> (accessed October 29, 2025).

<sup>72</sup> <https://www.ama-assn.org/public-health/environmental-health/fight-climate-change-and-save-money-go-green-your-practice> (accessed October 29, 2025).

be a reasonable accommodation. These conclusions align with the findings of the NYSDHR.

1. Americans with Disability Act

Enacted in 1990, the ADA is a civil rights law that prohibits discrimination against individuals with disabilities in all areas of public life, including jobs, schools, transportation, and all public and private places that are open to the public. Accessibility standards issued under the ADA apply to places of public accommodation, commercial facilities, and state and local government facilities in new construction, alterations, and additions. The purpose of the law is to make sure that persons with a disability have the same rights and opportunities as everyone else. For persons with a disability, the ADA guarantees equal opportunity for participation and inclusion public accommodations, employment, transportation, state and local government services, and telecommunications.<sup>73</sup>

The Petitioners and the Soft Lights Foundation do not identify which section of the ADA implementing regulation the Village's selected LED streetlights violate. The Commission reviewed each subsection of the ADA implementing regulations to determine if LED streetlights are subject to specific standards. Title III - Public Accommodations and Commercial Facilities contains regulations and compliance standards for public areas. While sidewalks, crosswalks, and public transportation terminals are subject to ADA regulations, there is no indication that outdoor overhead streetlighting facilities are subject to the statute.

Additionally, as discussed above, we acknowledge that the Resident submitted a statement from their doctor citing a diagnosis of underlying photosensitive epilepsy. However, there

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<sup>73</sup> See 28 CFR Part 36.

is no indication of any medical evidence submitted to National Grid, the Village, or in this proceeding to objectively document or confirm that the Village's switch to LED streetlight fixtures caused the Resident injury, harm, or material causal change in their underlying condition. In contrast, the Village and National Grid had an analysis conducted by RPI that shows that the LED streetlights in the Village produce less flicker than the HPS streetlights they replaced. While not necessarily definitive on its own, this suggests that the LED streetlights are, if anything, less impactful than the prior streetlights.

Moreover, as discussed below, the NYSDHR considered the Resident's complaint that the Village and National Grid have discriminated against the Resident due to a disability through the installation of the LED streetlights and dismissed the complaint. Although the complaint to NYSDHR is based in state law, the New York State Human Rights Law, that law, like the ADA, prohibits discrimination in any place of public accommodation based on disability.

## 2. New York State Division of Human Rights Determination

On June 17, 2021, the Resident and their spouse filed a complaint with the NYSDHR alleging that National Grid's conversion of the streetlight fixtures in the Village from HPS to LED constituted unlawful discriminatory practice relating to public accommodation because of disability in violation of Human Rights Law N.Y. Exec. Law, art. 15. The NYSDHR determined that there was no probable cause to believe that National Grid or the Village engaged in an unlawful discriminatory practice.<sup>74</sup>

The NYSDHR concluded that the Village had National Grid convert its streetlights from HPS fixtures to LED fixtures

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<sup>74</sup> Case 23-E-0727, New York State Division of Human Rights Determination and Order After Investigation (filed May 31, 2024).

as a part of the State's Smart Street Lighting NY program. National Grid and the Village considered the Resident's complaints and sought a third-party study by RPI to ascertain the impact of LED lighting upon individuals with photosensitive neurological disorders. Even though RPI's study findings did not support the Resident's contentions that the LED Lights caused physical harm, the Village and National Grid agreed to convert five of the streetlights surrounding the Resident's home back from LED fixtures to HPS fixtures. The Resident continued to insist that the Village cease use of LEDs for all streetlights. The NYSDHR's investigation revealed that implementing the Resident's proposed accommodation would cost the Village approximately \$455,400 for the reversion itself, \$11,655 in energy incentives, and approximately \$30,000 in annual energy savings. The Resident's proposed accommodation would also effectively eliminate the Village's participation in the LED conversion program.<sup>75</sup>

The NYSDHR investigation concluded that the Village and National Grid attempted to reasonably accommodate the Resident by offering to and in fact reverting five streetlights in the vicinity of the Resident's home from LED fixtures to HPS fixtures. The NYSDHR investigation revealed that the Resident's requested accommodation of reverting all streetlights in the Village to HPS fixtures is "not reasonable," as it would come at considerable financial cost to the Village and fundamentally alter the nature of its participation in the Smart Street Lighting NY initiative. Accordingly, the NYSDHR dismissed the Resident's complaint.<sup>76</sup>

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<sup>75</sup> Id.

<sup>76</sup> Id.

CONCLUSION

National Grid complied with its tariff when it converted streetlight luminaires from HPS to LED at the request of its customer, the Village. The LED streetlights National Grid has installed in the Village comply with all relevant standards and there is no allegation that they are malfunctioning. Based on the study produced by RPI, the LED streetlights produce less flicker than the HPS streetlights they replaced. Based on the information provided in this proceeding by National Grid, the Village, the Petitioners, and commenters, there is no basis for requiring National Grid to take the actions requested in the Petition. Accordingly, the Commission denies the Petition.

The Commission orders:

1. The Petition filed in this proceeding on December 13, 2021, is denied.
2. This proceeding is closed.

By the Commission,

(SIGNED)

MICHELLE L. PHILLIPS  
Secretary