

1 IN THE CASE OF OUTDOOR LIGHTING, THERE IS NOW GROWING RECOGNITION THAT
2 THE CONSEQUENCES ARE NOT ALTOGETHER BENIGN.

3 INCREASING SCIENTIFIC AND EXPERIENTIAL EVIDENCE DEMONSTRATES THAT
4 MISDIRECTED, UNSHIELDED, EXCESSIVE OR UNNECESSARY OUTDOOR NIGHT LIGHTING
5 HAS MAJOR DETRIMENTAL EFFECTS. ENERGY IS WASTED WHEN ILLUMINATION IS
6 USED EXCESSIVELY AND INEFFICIENTLY, CAUSING UNNECESSARY HEALTH-THREATEN-
7 ING EMISSIONS FROM BURNING OF FOSSIL FUELS. SUCH EMISSIONS ALSO POLLUTE
8 THE STATE'S WATERS AND CONTRIBUTE TO GLOBAL WARMING.

9 BECAUSE THE HUMAN EYE AUTOMATICALLY ADJUSTS TO THE BRIGHTEST LIGHT IN
10 VIEW, THE GLARE FROM UNSHIELDED OR EXCESSIVELY BRIGHT OUTDOOR LIGHTING
11 CAN ACTUALLY INTERFERE WITH THE CLEAR PERCEPTION OF OTHER OBJECTS IN
12 ONE'S FIELD OF VISION.

13 INAPPROPRIATE USE OF OUTDOOR LIGHTING CAN HAVE A NEGATIVE IMPACT ON
14 THE NATURAL ENVIRONMENT, INTERFERING WITH NORMAL PATTERNS OF ACTIVITY,
15 BEHAVIOR AND PHYSIOLOGY OF FLORA AND FAUNA. RECENT RESEARCH HAS INDIC-
16 CATED THAT EXPOSURE TO LIGHT AT NIGHT CAN UPSET NORMAL HUMAN CIRCADIAN
17 RHYTHMS, THEREBY DISRUPTING HORMONE SECRETIONS AND WEAKENING THE BODY'S
18 IMMUNE SYSTEM.

19 IN ADDITION, SKY GLOW FROM UNSHIELDED AND UNNECESSARY OUTDOOR LIGHTING
20 THWARTS THE AGES-OLD HUMAN YEARNING TO GAZE AT, LEARN FROM AND ENJOY THE
21 WONDERS OF THE NIGHT SKY.

22 THE LEGISLATURE FURTHER FINDS THAT COST-EFFECTIVE MEANS AND PRACTICES
23 EXIST THROUGH APPROPRIATE USE OF FIXTURES TO PROVIDE ADEQUATE NIGHT
24 LIGHTING WHEN NEEDED THAT IS SAFE AND EFFECTIVE BUT CAUSES MINIMAL LIGHT
25 TRESPASS, GLARE, AND SKY GLOW. THESE MEANS AND PRACTICES ARE POSSIBLE
26 WITH INCREASED PUBLIC AWARENESS THROUGH EDUCATION AND PRUDENT PUBLIC
27 ACTION AS PROVIDED IN THIS ARTICLE.

28 THEREFORE, IT IS THE PURPOSE OF THIS ARTICLE TO BEGIN LIMITING LIGHT
29 POLLUTION IN THE STATE IN A COST-EFFECTIVE AND SOCIALLY FEASIBLE MANNER
30 IN ORDER TO PROTECT PUBLIC HEALTH, SAFETY AND THE ENVIRONMENT.

31 S 20-0103. SHORT TITLE.

32 THIS ARTICLE SHALL BE KNOWN AND MAY BE CITED AS THE "HEALTHY, SAFE AND
33 ENERGY EFFICIENT OUTDOOR LIGHTING ACT".

34 S 20-0105. DEFINITIONS.

35 AS USED IN THIS ARTICLE:

36 1. "FIXTURE" MEANS A COMPLETE LIGHTING UNIT, INCLUDING A LAMP TOGETHER
37 WITH THE PARTS DESIGNED TO DISTRIBUTE THE LIGHT, TO POSITION AND PROTECT
38 THE LAMP, AND TO CONNECT THE LAMP TO THE POWER SUPPLY.

39 2. "GLARE" MEANS LIGHT EMITTED BY A FIXTURE THAT CAUSES DISCOMFORT OR
40 REDUCED VISIBILITY OR MOMENTARY BLINDNESS.

41 3. "LAMP" MEANS A LIGHT BULB OR OTHER COMPONENT OF A FIXTURE THAT
42 CHANGES ELECTRICITY INTO VISIBLE LIGHT.

43 4. "LIGHT POLLUTION" MEAN ANY ADVERSE EFFECT OF OUTDOOR LIGHTING
44 INCLUDING, BUT NOT LIMITED TO, GLARE AND SKY GLOW.

45 5. "LUMEN" MEANS A STANDARD UNIT OF MEASUREMENT OF THE QUANTITY OF
46 LIGHT EMITTED FROM A LAMP, AS DISTINCT FROM "WATT", A MEASURE OF POWER
47 CONSUMPTION.

48 6. "SKY GLOW" MEANS THE ILLUMINATION OF THE NIGHTTIME SKY THAT RESULTS
49 FROM UPWARD SHINING LIGHT, WHICH IS REFLECTED OFF MOLECULES AND PARTI-
50 CLES OF DIRT AND MOISTURE IN THE ATMOSPHERE.

51 S 20-0107. DARK-SKY PRESERVES.

52 1. THE COMMISSIONER IN CONSULTATION WITH AFFECTED STATE AGENCIES AND
53 LOCAL AUTHORITIES MAY IDENTIFY AND NOMINATE AS "DARK-SKY PRESERVES"
54 AREAS OF THE STATE WHICH ARE ESPECIALLY SUITABLE FOR ASTRONOMICAL OBSER-
55 VATIONS AND/OR WHICH PROVIDE, DUE TO THEIR DARKNESS, NOCTURNAL BENEFITS

1 TO FLORA AND FAUNA, OR TO CITIZENS DESIRING VIEWS OF UNPOLLUTED OR RELA-
2 TIVELY UNPOLLUTED NIGHT SKIES.

3 2. WITHIN EIGHTEEN MONTHS OF THE NOMINATION OF THE FIRST DARK-SKY
4 PRESERVE, THE COMMISSIONER SHALL PREPARE AND SUBMIT TO THE GOVERNOR AND
5 LEGISLATURE FOR REVIEW AND APPROVAL A PROPOSED PLAN TO PRESERVE THESE
6 AREAS AS NECESSARY AND APPROPRIATE TO PROTECT ASTRONOMICAL OBSERVATIONS
7 AND/OR FLORA AND FAUNA.

8 S 20-0109. MODEL COMPREHENSIVE OUTDOOR LIGHTING ORDINANCE.

9 THE COMMISSIONER, IN CONSULTATION WITH THE NEW YORK STATE ENERGY
10 RESEARCH AND DEVELOPMENT AUTHORITY, THE SECRETARY OF STATE AND THE
11 COMMISSIONERS OF TRANSPORTATION AND THE OFFICE OF GENERAL SERVICES,
12 SHALL PREPARE OR CAUSE TO BE PREPARED AND DISTRIBUTED TO CITIES, TOWNS
13 AND VILLAGES A MODEL COMPREHENSIVE OUTDOOR LIGHTING ORDINANCE FOR THE
14 PURPOSE OF SAVING ENERGY, REDUCING UNNECESSARY GLARE AND REDUCING UNNEC-
15 ESSARY SKY GLOW.

16 S 20-0111. INFORMATIONAL PAMPHLET.

17 THE COMMISSIONER, IN CONSULTATION WITH THE NEW YORK STATE ENERGY
18 RESEARCH AND DEVELOPMENT AUTHORITY AND GIVING CONSIDERATION TO THE
19 RECOMMENDED PRACTICES ADOPTED BY THE ILLUMINATING ENGINEERING SOCIETY OF
20 NORTH AMERICA, SHALL DEVELOP AND DISTRIBUTE TO EVERY MUNICIPALITY AND
21 EVERY ELECTRIC CORPORATION OR MUNICIPALITY PROVIDING ELECTRIC SERVICE IN
22 THIS STATE A PAMPHLET CONTAINING INFORMATION REGARDING THE PROVISIONS OF
23 THIS ARTICLE WITH RESPECT TO OUTDOOR LIGHTING.

24 S 20-0113. APPLICABILITY.

25 THE PROVISIONS OF THIS ARTICLE ARE CUMULATIVE AND SUPPLEMENTAL AND
26 SHALL NOT APPLY WITHIN ANY COUNTY OR MUNICIPALITY THAT, BY ORDINANCE OR
27 RESOLUTION, HAS ADOPTED PROVISIONS RESTRICTING LIGHT POLLUTION THAT ARE
28 AS, OR MORE, STRINGENT THAN THE PROVISIONS OF THIS ARTICLE.

29 S 2. Section 44 of the public service law is amended by adding a new
30 subdivision 6 to read as follows:

31 6. THE COMMISSION SHALL REQUIRE EVERY ELECTRIC CORPORATION OR MUNICI-
32 PALITY PROVIDING ELECTRIC SERVICE TO SEND TO EACH CUSTOMER IN ITS BILLS
33 A COPY OF THE INFORMATIONAL PAMPHLET RELATING TO OUTDOOR LIGHTING DEVEL-
34 OPED BY THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION PURSUANT TO SECTION
35 20-0113 OF THE ENVIRONMENTAL CONSERVATION LAW. THE COMMISSION SHALL
36 COORDINATE WITH THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION TO ENSURE
37 THAT EVERY ELECTRIC CORPORATION AND MUNICIPALITY PROVIDING ELECTRIC
38 SERVICE SHALL RECEIVE AN ADEQUATE SUPPLY OF SUCH PAMPHLETS SUITABLE FOR
39 DISTRIBUTION TO ITS CUSTOMERS IN THEIR UTILITY BILLS.

40 S 3. Paragraphs e, i and o of subdivision 1, and paragraph e of subdi-
41 vision 2 of section 143 of the public buildings law, as added by chapter
42 512 of the laws of 2014, are amended and two new paragraphs q and r are
43 added to subdivision 1 to read as follows:

44 e. "Glare" means light emitted by a fixture that causes discomfort or
45 reduced visibility OR MOMENTARY BLINDNESS.

46 i. "Lumen" means a standard unit of measurement of the quantity of
47 light emitted from a lamp AS DISTINCT FROM "WATT", A MEASURE OF POWER
48 CONSUMPTION.

49 o. "Sky glow" means [a condition caused by light directed upwards or
50 sideways reducing one's ability to view the night sky] THE ILLUMINATION
51 OF THE NIGHTTIME SKY THAT RESULTS FROM UPWARD SHINING LIGHT, WHICH IS
52 REFLECTED OFF MOLECULES AND PARTICLES OF DIRECT AND MOISTURE IN THE
53 ATMOSPHERE.

54 Q. "CONTINUOUS ROADWAY LIGHTING DESIGN" MEANS A LIGHTING PLAN THAT
55 ESTIMATES LIGHT ON A ROADWAY FROM CALCULATIONS UTILIZING FACTORS INCLUD-
56 ING, BUT NOT LIMITED TO, A PARTICULAR FIXTURE, MOUNTING HEIGHT, OR POLE

SPACING, IN ORDER TO MEET A SPECIFIED GOAL SUCH AS MINIMUM LIGHTING LEVEL, UNIFORMITY, OR SMALL-TARGET VISIBILITY. LIGHTING PLACED ONLY AT INTERSECTIONS OR OTHER POTENTIALLY HAZARDOUS LOCATIONS SHALL NOT BE CONSIDERED CONTINUOUS.

R. "LIGHT POLLUTION" MEANS ANY ADVERSE EFFECT OF OUTDOOR LIGHTING INCLUDING, BUT NOT LIMITED TO, GLARE AND SKY GLOW.

e. For illumination by new permanent outdoor fixtures for applications described in paragraph a, b, c or d of this subdivision, only illumination levels that are no greater than those required for the intended purpose may be used, as established by the commissioner of the office of general services in consultation with the department of transportation and the New York State Energy Research and Development Authority, and given due consideration to lighting industry standards and practices AND THAT MET THE FIXTURE EFFICIENCY AND LAMP LUMINOUS EFFICACY STANDARDS DEVELOPED PURSUANT TO SUBDIVISION FIVE OF THIS SECTION.

S 4. Paragraphs g and h of subdivision 3 of section 143 of the public buildings law, as added by chapter 512 of the laws of 2014, are amended and a new paragraph i is added to read as follows:

g. to lighting intended for tunnels and roadway underpasses; [or]

h. if the combined cost of acquiring and operating a fixture complying with paragraphs a, b and c of this subdivision is more than fifteen percent greater than the cost of acquiring and operating comparable non-compliant fixtures over the life of the lighting system and if a written determination with findings has been made that no compliant fixture exists that would meet the cost limitation[.]; OR

I. THE FIXTURE IS A HISTORIC-STYLE DECORATIVE FIXTURE WHICH IS PART OF A CONTINUOUS ROADWAY LIGHTING DESIGN WHERE THE REPLACEMENT OF THE FIXTURE PIECEMEAL WITH COMPLIANT FIXTURES WOULD UNACCEPTABLY DEGRADE THE AESTHETIC CHARACTERISTICS OF THE EXISTING LIGHTING DESIGN.

S 5. Section 143 of the public buildings law is amended by adding two new subdivisions 5 and 6 to read as follows:

5. THE COMMISSIONER OF ENVIRONMENTAL CONSERVATION, IN CONSULTATION WITH THE NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY, SHALL DEVELOP FIXTURE EFFICIENCY AND LAMP LUMINOUS EFFICACY STANDARDS FOR LIGHTING REGULATED UNDER THIS SECTION. FOR PURPOSES OF THIS SECTION "FIXTURE EFFICIENCY" SHALL MEAN THE PERCENTAGE OF LUMENS GENERATED BY A LAMP WHICH ACTUALLY LEAVE A FIXTURE; AND "LAMP LUMINOUS EFFICACY" SHALL MEAN THE AMOUNT OF LIGHT GENERATED BY A LAMP/BALLAST SYSTEM (IN LUMENS) DIVIDED BY THE POWER IT USES (IN WATTS). SUCH STANDARDS SHALL BE PROMULGATED ON OR BEFORE THE EFFECTIVE DATE OF THIS ARTICLE AND SHALL TAKE EFFECT ONE HUNDRED EIGHTY DAYS AFTER SUCH EFFECTIVE DATE.

6. IN RECOGNITION OF THE ONGOING RESEARCH INTO AND DEVELOPMENT OF NEW TECHNOLOGIES IN THE OUTDOOR LIGHTING FIELD, THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, IN CONSULTATION WITH THE NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY, SHALL REPORT TO THE LEGISLATURE REGARDING NEW FINDINGS FROM RESEARCH AND NEW TECHNOLOGIES THAT MAY AFFECT THE PROVISIONS OF THIS ARTICLE. SUCH REPORTING MAY INCLUDE RECOMMENDED AMENDMENTS TO THIS ARTICLE TO INCREASE ITS EFFECTIVENESS IN IMPLEMENTING THE PURPOSES OF ACHIEVING HEALTHY, SAFE AND ENERGY EFFICIENT OUTDOOR LIGHTING.

S 6. This act shall take effect on the first of January next succeeding the date upon which it shall have become a law; provided, however, that if chapter 512 of the laws of 2014 shall not have taken effect on or before such date then sections three, four and five of this act shall take effect on the same date and in the same manner as such chapter of the laws of 2014 takes effect; provided further, however, that effective

1 immediately, the addition, amendment and/or repeal of any rule or regu-
2 lation or development of any standards necessary for the implementation
3 of this act on its effective date is authorized to be made and completed
4 on or before such effective date; and provided further that on and after
5 the date on which this act shall have become a law every state agency
6 and public corporation shall comply with the changes to section 143 of
7 the public buildings law as amended by sections three, four and five of
8 this act, but provided further that this act shall not apply to projects
9 for the installation or replacement of permanent outdoor fixtures which
10 have already received final design approval prior to the effective date
11 of this act.