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**BUILDINGS BULLETIN 2017-004**  
**Technical**

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**Supersedes:** Bulletin 2010-032

**Issuer:** Gus Sirakis, P.E.  
Assistant Commissioner for Technical Affairs and Code Development

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**Purpose:** This document clarifies conditions under which an addition, alteration, or repair to a lighting or electrical power system or control equipment may not be required to comply with the New York City Energy Conservation Code (NYCECC), pursuant to NYCECC Chapter R5 and Chapter C5.

**Related Code Section(s):**

NYCECC 101.2.3	ASHRAE 90.1 Section 8
NYCECC R404	ASHRAE 90.1 Section 9
NYCECC C405	ASHRAE 90.1 Section 10
NYCECC C408	1 RCNY 5000-01

**Subject(s):** Additions, lighting systems; Alterations, lighting systems; Repairs, lighting systems; Replacement, lighting systems; Lighting systems, luminaires; Lighting systems, lighting fixtures; Lighting systems, lighting fixtures, lamps; Lighting systems, lighting fixtures, ballasts; Lighting systems, lighting power density; Interior lighting; Exterior lighting; Lighting systems, commissioning; Electrical, electrical or control equipment; Electrical, energy use; New York City Energy Conservation Code, Energy Code

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In accordance with NYCECC Chapter R5, Chapter C5, R404, C405 and ASHRAE 90.1 sections 8, 9 and 10, additions, alterations, and/or repairs to lighting and/or power systems and equipment shall be as follows, provided that energy use of the building is not increased:

1. **Interior lighting systems.** For additions, refer to section NYCECC R502 or C502. For alterations or repairs to lighting systems, refer to section NYCECC R503, R504, C503, or C504, and to the following:
  - a. **Luminaires.** When following the NYCECC, and 20 percent or more of the luminaires within a space are being replaced, the addition, alteration, or repair in each case shall comply with the lighting provisions of the NYCECC as applicable. When following ASHRAE 90.1, and 20 percent or more of the connected lighting load within a space is being replaced, the addition, alteration, or repair in each case shall comply with the lighting provisions of ASHRAE 90.1 as applicable.
  - b. **Lamps.** Lamp replacement shall be as follows:
    - i. **Dwelling units.** Replacement of lamps within dwelling units shall be by high-efficacy lamps where such lamps are available for such lighting fixtures, but such replacement need not exceed the requirements of sections NYCECC R404 and C405.
    - ii. **Replacement of lamps but not ballasts in other than dwelling units.** Lamps within fixtures shall be replaced by high-efficacy lamps unless the owner or applicant can demonstrate that such lamps are not available for such fixtures.

- c. **Replacement of ballasts but not lamps.** Ballast replacement within fixtures shall be with high-efficiency ballasts unless the owner or applicant can demonstrate that such ballasts are not available for such fixtures.
- d. **Controls.** Replacement of lighting controls shall comply with the provisions of the NYCECC or ASHRAE 90.1, as applicable, for new controls.
- e. **Trade-offs.** Lighting additions, alterations, and repairs within the scope of work shall be permitted to utilize trade-offs provided the total interior lighting power allowance of all the areas illuminated by the scope of work, in accordance with the NYCECC or ASHRAE 90.1, as applicable, is not exceeded.

Exceptions:

1. If the applicant can demonstrate through a whole-building energy modeling analysis that the building, including the proposed scope of work, complies with the NYCECC, then lighting may be used to trade-off with other elements of the energy analysis.
  2. In cases where the existing lighting power density within the area of the scope of work is less than the lighting power density allowed by the NYCECC because of a previous trade-off with less efficient lighting in other areas of the building, and/or less efficient envelope, HVAC or service water heating systems, the proposed total installed lighting power of the area illuminated by the scope of work shall not exceed the existing total installed lighting power notwithstanding the lighting power density as determined by the requirements of the NYCECC.
2. **Exterior lighting systems.** Alteration of exterior lighting systems and/or replacement of exterior lighting fixtures, lamps, ballasts and/or controls, and shall comply with the provisions of section NYCECC C405.2.5 and C405.5 or ASHRAE 90.1 sections 9.4.1.4 and/or 9.4.2, as applicable, to the extent of the alteration.
  3. **Electrical or control equipment.** Electrical or control equipment regulated by the NYCECC or ASHRAE 90.1, as applicable, shall be altered, renovated or repaired as follows:
    - a. **Equipment replacement.** Existing electrical or control equipment shall be replaced with equipment that complies with sizing and performance requirements of the NYCECC or ASHRAE 90.1, as applicable, for new equipment.
    - b. **Equipment alteration or repair for a different function.** Existing electrical or control equipment that is altered to perform a different function that is regulated by the NYCECC shall comply with sizing and performance requirements of the NYCECC or ASHRAE 90.1, as applicable, for new equipment for such function.
    - c. **Equipment repair for the same function.** Existing electrical or control equipment that is repaired to continue its operation in the same function shall not be required to comply with sizing or performance requirements for new equipment.