LDR-23-01: Required installation of solar photovoltaic system for new buildings subject to Vermont Commercial Building Energy Standards

NOTE: ALL TEXT BELOW ARE PROPOSED ADDITIONS TO THE LDR.

3.19 On-Site Solar Photovoltaic Systems

A. **Purpose.** It is the purpose of this section to implement renewable energy objectives of the City's Comprehensive Plan and Climate Action Plan by providing for the installation of on-site solar photovoltaic, or other renewable energy generation, on new buildings in concert with Solar-Ready Zone definitions established by the Vermont Commercial Building Energy Standards (CBES).

B. **Applicability and Standard.** This section shall apply to the receipt of a zoning permit for the construction and subsequent alteration of any building that, beginning [INSERT EFFECTIVE DATE OF LDR] is required by these regulations and/or the CBES, as amended from time to time, to establish a "solar-ready zone". For any such building required to establish a solar-ready zone, there shall be installed a solar photovoltaic ("Solar PV") system designed to maximize the use of the area of the Solar-Ready Zone employing typical Solar PV panel configurations, provided that

(1) The requirement set forth herein shall be reduced to the extent:

(a) The interconnection with the relevant utility cannot accommodate (i.e., due to limited plant capacity) a Solar PV system designed to maximize the use of the area of the Solar-Ready Zone employing typical Solar PV panel configurations, or

(b) The Solar PV system is anticipated to generate in its first year of operation more kilowatt hours (kWh) than the "Expected Building Usage."

(i) The kWh that a Solar PV system is anticipated to generate shall be estimated based on the building site conditions by applying the "PVWatts Calculator" published by the National Renewable Energy Laboratory, or an equivalent or successor calculator.

(ii) The "Expected Building Usage" shall be an estimate of the number of kWhs the building is expected to consume during its first full year of typical operation, based on building type and uses, building technology, devices and appliances in the Northeastern U.S. (such as the "Baseline Energy Calculator" tool of the Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy).

(2) The requirement set forth herein shall be eliminated if the Solar PV system design that maximizes the use of the area of the Solar-Ready Zone employing typical Solar PV panel configurations is anticipated to generate less than 3,000 kWh of electricity in the first year of the building's operation as calculated above.

(3) It is not the intent of this section to require that a Solar PV system interconnect with an electric utility or to require installation of a net metering system.

(4) Where a permanently-installed, on-site renewable energy system, as defined within the CBES, is provided in lieu of a Solar-Ready Zone, the applicant shall demonstrate that said system will generate a number of kWh that is equivalent to the number of kWh a Solar PV system is estimated to generate if a Solar-Ready Zone were established.

C. **Submission Requirements**: The application for a zoning permit shall include:

(1) Certification by a qualified professional of the Expected Building Usage and of the anticipated kWh generation of the Solar PV system, and

(2) As applicable, a written statement from the relevant utility or other evidence sufficient to determine the extent to which the requirement for a Solar PV system is reduced under Subsection B (1-2).