

SOLAR ENERGY SYSTEMS
DRAFT ORDINANCE - Durham, New Hampshire
Amendments proposed by Malcolm Sandberg
for April 10, 2019 Continued Public Hearing

Proposed amendments to the Durham Zoning Ordinance to accommodate solar energy systems.

- ❖ **Revise Article XX – Standards for Specific Uses, Section 175-109, R. to insert before Temporary Sawmill the following:).**

Solar Energy Systems. Solar energy systems shall be allowed in conformance with the following standards and procedures (See Definitions for solar energy systems).

1. **Authority.** This ordinance is adopted pursuant to RSAs 362-F, 374-G, 477:49, 672:1 III-a, and 674:17 (I)(j).
2. **Purpose.** The purpose of this ordinance is to:
 - a. encourage, facilitate and regulate the installation of solar energy systems in accordance with the recommendations stated in the Energy Chapter of the 2015 Durham Master Plan;
 - b. promote environmental sustainability while respecting aesthetics, rural character and scenic landscapes of Durham and protecting the of productive agricultural land; and
 - c. comply with and support the State of New Hampshire’s goal of developing clean, safe, renewable energy resources as provided for in the statutes referred to in 1., above.

- ❖ **Make the following changes in Article II. Definitions.**

- **Add this new section for “Solar Energy Systems.” Place this section right before “Solid Waste” and retain the order as shown here.**

SOLAR ENERGY SYSTEMS – Specific definitions pertinent to solar energy systems follow.

Solar Energy – Radiant energy emitted by the sun.

Solar Energy System – A structure and the related components used to transform solar energy into electricity (through a solar photovoltaic system) or heat (through a solar thermal system).

Solar Photovoltaic System – A solar collection, inversion, storage and distribution system that converts sunlight into electricity.

Solar Thermal System – A solar collection system that directly heats a heat-transfer medium.

Buffering: The use of landscaping to create a natural-looking vegetative buffer to mitigate the visual impact of freestanding solar systems from roadways and neighboring properties

Building-Mounted Solar Energy System – A solar energy system attached to and completely supported by a building that does not extend more than 5 feet beyond the building footprint. The system may include necessary accessory equipment that is ground mounted.

Freestanding Solar Energy System – A ground-mounted solar energy system, including a stationary or tracking system (either single axis or dual axis).

Accessory Use Solar Energy System:

A solar installation designed to provide on-site energy use.

Principal Use Solar Energy System:

A solar installation specifically designed to provide off-site energy use

Carport - A roofed structure for parking motor vehicles that is open on at least two sides.

- a. A solar energy system installed on a freestanding carport shall be considered a free-standing solar energy system.
- b. A solar energy system installed on an attached carport shall be considered a building-mounted solar energy system.

❖ *Modify the Table of Uses as follows:*

Add the new uses below in the Table of Uses in Section 175-53 under Subsection VI. Utility & Transportation Uses at the end after Personal Wireless Services Facility:

CATEGORY OF USES	RESIDENTIAL ZONES				COMMERCIAL CORE ZONES					RESEARCH-INDUSTRY ZONES			
	Rural (R)	Residence A (RA)	Residence B (RB)	Residence C (RC)	Central Business (CB)	Professional Office (PO)	Church Hill (CH)	Courthouse (C)	Coe's Corner (CC)	Office Research - Route 108 (OR)	Mixed Use and Office Research (MUDOR)	Office Research Light Industry (ORLI)	Durham Business Park (DBP)
VI. UTILITY & TRANSPORTATION USES													
Accessory Use Solar Energy System													
• Building-mounted	P	P	P	P	P	P	P	P	P	P	P	P	P
• Freestanding	P	P	P	P	X	P	P	P	P	P	P	P	P
Principal Use Solar Energy System													
• Building-mounted	X	X	X	X	P	P	P	P	P	P	P	P	P
• Freestanding	X	X	X	X	X	X	X	X	CU	CU	CU	CU	CU

❖ *Modify the Wetland Conservation Overlay District and Shoreland Preservation Overlay District as follows:*

➤ *Add the following use at the end of Section 175-60. Permitted Uses in the WCOD Subsection A.:*

10. Building-mounted solar energy system as provided for in the Table of Uses, Section 175-53 under Subsection VI. Utility & Transportation Uses.

➤ *Add the following use at the end of Section 175-71. Permitted Uses in the SPOD Subsection A.:*

10. Building-mounted solar energy system as provided for in the Table of Uses, Section 175-53 under Subsection VI. Utility & Transportation Uses.

➤ *Add the following use at the end of Section 175-61. Conditional Uses in the WCOD:*

6. Freestanding solar energy system as provided for in the Table of Uses, Section 175-53 under Subsection VI. Utility & Transportation Uses.

➤ *Add the following use at the end of Section 175-72. Conditional Uses in the SPOD:*

6. Freestanding solar energy system as provided for in the Table of Uses, Section 175-53 under Subsection VI. Utility & Transportation Uses.

❖ *Revise Article XX – Standards for Specific Uses, Section 175-109, R. to insert before Temporary Sawmill the following:).*

3. **Applicability.** Solar installations that are designed to produce less than one kilowatt and are not connected to the electrical grid are not covered by this ordinance, though they may be subject to other specific regulations.

4. **Accessory Use Solar Energy Systems.** The following provisions apply to residential and non-residential solar energy systems.

a. **Basic requirements.** Accessory uses shall be limited in size to serve residences or non-residences (whether private, commercial or municipal), including single or multi-unit dwellings, factories, warehouses, retail sales locations, outbuildings and agricultural operations with barns, outbuildings or farm stands.

b. A building permit is required

c. Site plan review required for systems other than single/duplex family systems

- d. **Placement of Freestanding Accessory Solar Systems.**
- i. No part of a freestanding solar energy system may be placed closer to the front property line (and side property line in the case of a corner lot) than the fully enclosed part of the building closest to the street.
 - ii. a freestanding solar energy system that exceeds 12 feet in height (any part of the system), may not be placed closer to the front property line (and side property line in the case of a corner lot) than the fully enclosed part of the building furthest from the street.
 - iii. In no case shall a freestanding system be less than 50 feet from a property boundary.
 - iv. In no case shall a freestanding system that exceeds 12 feet in height be less than 100 feet from a property boundary abutting a designated scenic road.
 - v. Visual buffering shall be required
 - vi. Site plan review required for systems other than single/duplex family systems
 - vii. Special Exception: A proposed system that can not conform with i. to iv. above may be approved by a Special Exception
- e. The Planning Board may require an analysis of potential glare at its discretion.

6. Principal Use Solar Energy System Standards and Procedures

- a. Site Plan: Site plan review is required for all systems.
- b. Basic requirements: Principal use solar systems shall conform to state statutes and regulations (as from time to time amended) related to solar services agreements and shall provide evidence of such to the planning board
- c. Placement of Principal Solar Energy Systems.
 - i. Any freestanding system shall be set back at least 100 feet from property lines abutting a public way.
 - ii. The system shall be visually buffered from abutting roads and properties in accordance with the Site Plan Regulations.
- d. Special Exception. The Zoning Board of Adjustment may grant special exceptions in Zones R or RC for Principal Use Solar Energy Systems designed to provide energy to its specific neighborhood and is scaled to meet the projected energy requirements of that neighborhood
- e. The Planning Board may require an analysis of potential glare at its discretion.

7. **Other provisions.** The following additional provisions apply to all solar energy systems.
- a. **Building permit.** A building permit is required for the installation of any **Solar Energy** System.
 - b. **Setbacks.** Every part of a freestanding system, including components elevated above the ground, components that track and move, and necessary accessory equipment that is ground mounted, shall conform to required setbacks for the zoning district.
 - c. **Maximum height.** The maximum height for any part of the system is ten feet above the ridge of the roof or ten feet above the highest part of the roof where there is no ridge. The maximum height for freestanding systems is 25 feet.
 - d. **Impervious surface.** The maximum impervious surface ratio in the Table of Dimensions does not apply to solar energy systems.
 - e. **Submission requirements.** Applicants for projects that require a site plan shall submit all pertinent information, including specifications for the equipment, to the Planning Board, as specified in the Site Plan Regulations. Applicants for a special exception shall submit plans showing all pertinent aspects of the project and all elements specified by the Zoning Board of Adjustment.
 - f. **Decommissioning.** Applicants for freestanding Multiunit Residential, Nonresidential or freestanding **Principal** Use Solar Energy Systems shall submit a plan as part of site plan review for the removal of the structures and reclamation of the site when the system is no longer in use.
 - g. **Historic District.** Additional procedures and standards for proposed solar energy systems located within the Durham Historic District are contained in Article XVII of this ordinance.
 - h. **Solar easements.** Private property owners may establish solar skyspace easements to preserve access to solar energy at their option pursuant to RSAs 477:49, 50, and 51.
 - i. **Review process.** The process for review of proposed solar energy systems is specified in Table 175-109 R below. (In case of any conflict between this table and the text of the ordinance or the Table of Uses, the text of the ordinance and the Table of Uses shall prevail.)

TABLE 175-109 R - REVIEW PROCESS FOR SOLAR ENERGY SYSTEMS

<i>Type of use</i>	<i>Building-mounted</i>	<i>Freestanding</i>
Accessory Use	Permitted in all zones	Permitted in all zones. Special exception required in CB zone. Site plan review for systems other than single/duplex family systems
Principal Use	Permitted use in all Commercial Core and Research-Industry zones Site plan review	Conditional Use in Coe's Corner zone and Research-Industry zones. Special Exception in R and RC zones where the system is scaled for neighborhood use may be granted. Site plan review