

CHAPTER 1477. REGULATIONS FOR THE USE AND INSTALLATION OF SOLAR ENERGY SYSTEMS

PURPOSE

It is the purpose of this regulation to promote the safe, effective and efficient use of solar energy systems, installed to reduce the on-site consumption of utility supplied electricity in all zoning districts within the City of North Royalton.

1477.01 DEFINITIONS

As used in this chapter:

- (a) "Alternating-Current (ac) Module (Alternating-Current Photovoltaic Module)" means a complete, environmentally protected unit consisting of solar cells, optics, inverter, and other components, exclusive of tracker, designed to generate ac power when exposed to sunlight.
- (b) "Array" means a mechanically integrated assembly of modules or panels with a support structure and foundations, tracker, and other components, as required, to form a direct-current power producing unit.
- (c) "Building Integrated Photovoltaics" means photovoltaic cells, devices, modules, or modular materials that are integrated into the outer surface or structure of a building and serve as the outer protective surface of that building.
- (d) "Electrical Production and Distribution Network" means a power production, distribution, and utilization system, such as a utility system and connected loads, which is external to and not controlled by photovoltaic power system.
- (e) "Off-grid" means not using or depending on public utilities, especially the supply of electricity.
- (f) "Solar Cell" means the basic photovoltaic device that generates electricity when exposed to light.
- (g) "Solar Panel" means an electrical device consisting of a large array of connected solar cells.
- (h) "Solar Photovoltaic Systems" means the total components and sub-systems that, in combination, convert solar energy into electric energy suitable for connection to utilization load.
- (i) "Stand-Alone System" means a solar photovoltaic system that supplies power independently of an electrical production and distribution network.

1477.02 TYPES OF SOLAR SYSTEMS

- (a) Solar water heating for use in buildings.
- (b) Solar water heating for space heating.
- (c) Solar pool heating.
- (d) Photovoltaic systems.

1477.03 CONDITIONAL USE PERMIT

A solar energy system or systems shall require a conditional use permit in all zoning districts of the City except for Residential R1-A, R1-B, RM-D, RRZ Zones where they are considered a permitted use. A surety bond or similar instrument is required at the time of construction as a requirement for the Conditional Use Permit for removal of an abandoned system. Application for the Conditional use permit shall be made in accordance with City Ordinances.

1477.04 STANDARDS

- (a) General
 - (1) No ground mounted solar energy system shall be visible from the street or alley adjacent to the front of the main dwelling, main building or main structure.
 - (2) Roof mounted solar energy systems shall not be located within 3 feet of the roof line in any

direction including the peak. Roof mounted panels on a sloped roof shall not show any apparent change in relief or projection of any roof elevation. Roof mounted panels on a flat roof shall not project vertically more than 5 feet from the surface of the roof.

- (3) Ground mounted solar panels may not exceed 6 feet average in height as measured from the natural grade and shall be designed and constructed to support all snow, wind and seismic loads.
 - (4) Within Residential R1-A, R1-B, RM-D, and RRZ Zones, the permitted square footage of ground mounted solar panels shall not exceed 25% of rear yard area within the width of the main dwelling, main building or main structure and shall not encroach upon required rear and side setbacks as defined in this section. The total square footage is to be determined by the dimensions of the panel regardless of mounted angle.
- (b) Setbacks
- (1) A ground mounted solar energy system or systems shall not project past the width of the main dwelling, main building or main structure. Rear yard and Side yard setbacks shall be a minimum of ten (10) feet measured from the property line.
 - (2) A solar energy system or systems shall not be located in the front or side yards.
 - (3) Roof mounted solar energy systems shall not be placed on the roof that fronts the street; also applies to corner lots with two fronts.
- (c) Access
- All ground mounted electrical and control equipment shall be labeled and secured to prevent unauthorized access. All conductors supplying power to the equipment shall be underground.
- (d) Appearance. Color and Finish
- The solar energy system shall remain painted or finished in the color or finish that was originally applied by the manufacturer, unless a different color or finish is approved by Planning Commission and Council.
- (e) Signs
- There shall be no signs that are visible from any public road posted on a solar energy system or any associated building, except for the manufacturers or installers identification, appropriate warning signs or owner identification.
- (f) Utility Interconnection and Notification
- Solar energy systems that connect to the electrical utility shall comply with Ohio's Interconnection Standards, NEC Standards and the standards of the utility and all other applicable standards.
- (g) Mounting
- No type of solar energy system may be mounted to any accessory structure.
- (h) Screening
- All ground mounted solar energy system or systems shall be screened from view with a fence or vegetation to an average maximum height of six (6) feet measured from natural grade and shall be installed and constructed as outlined in Section 1467 of the Codified Ordinances of the City of North Royalton. A separate permit shall be required.
- (i) Variance
- The applicant may apply to the Board of Zoning Appeals for a variance for subsections (a)-{h).

1477.05 COMPLIANCE WITH THE OHIO BUILDING CODE

Building permit applications for a solar energy system or systems shall be accompanied by standard construction documents of the solar panel and related frame work, including but not limited to: the mounting hardware and attachment to the dwelling, building or structure, base and/or footings, etc. An engineering analysis showing compliance with the current adopted Ohio Building Code shall be prepared by a registered design professional and shall be submitted at the time of application. This analysis may be prepared by the manufacturer of the solar panel provided that he/she is a registered design professional in the State of Ohio. This analysis and construction documents shall be sealed according to the State of Ohio Seal law.

1477.06 SITE PLAN

- (a) A site plan shall be prepared and stamped by a design professional registered in the State of Ohio.
- (b) The site plan shall:
 - (1) shall be drawn to a minimum scale of" per 1'-0" and all site plan surveys shall be drawn at a minimum of 1" equals 20';
 - (2) Show property address, lines and physical dimensions of the property;
 - (3) Show location, dimensions and types of existing structures on the property;
 - (4) Show the location of the proposed solar energy system;
 - (5) Show the right of way of any public road that is contiguous to the property;
 - (6) Show any overhead utility lines including any special easements for the lines;
 - (7) Show any underground utilities present within proximity of the solar energy system or its foundations;
 - (8) Show all specified set back distances;
 - (9) Show all property owners, areas and structures within 200 feet of the proposed system;
 - (10) Indicate solar energy system manufacturer, contact information, make, model number, and min and max KW or KVA ratings for photovoltaic units.
- (c) The site plan shall be reviewed by the City Engineer for technical analysis and the Building Inspector shall review for zoning issues. The Building Commissioner shall review and approve the construction documents.

1477.07 COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE

An electrical permit application for a solar energy system or systems shall be accompanied by a line drawing of the electrical components in sufficient detail to allow for a determination that the manner of installation conforms to the current adopted National Electrical Code (NRCO Chapter 1424). This engineering analysis showing compliance with the current adopted National Electrical Code shall be prepared by a registered design professional and shall be submitted at the time of application. This analysis may be prepared by the manufacturer of the solar panel provided that he/she is a registered design professional in the State of Ohio. This analysis shall be sealed according to the State of Ohio Seal law.

1477.08 UTILITY NOTIFICATION

No solar energy system or systems shall be installed until evidence has been presented to the Building Commissioner that the utility company has been informed of the customer's intent to install an interconnected customer-owned solar energy system. Off-grid systems shall be exempt from this requirement. A Supplemental Review and or a System Impact and Facility Study may be required. The applicant will need to contact the utility company to inquire about their procedures and requirements.

1477.09 FEES

All building construction fees and deposits and review fees charged as outlined in Section 214.08 of the Codified Ordinances of the City of North Royalton shall be the responsibility of the applicant or his/her duly authorized agent along with any fees imposed by the utility company.

1477.10 APPLICATION

The applicant or his/her duly authorized agent shall make application to the Building Commissioner. Construction documents as herein described shall be submitted at the time of the application.

1477.11 ABANDONMENT

- (a) At such time that a solar energy system is scheduled to be abandoned or discontinued, the applicant will notify the Building Commissioner by certified U.S. mail of the proposed date of abandonment or discontinuation of operations.
- (b) Upon abandonment or discontinuation of use, the owner shall physically remove the solar energy system within 90 days from the date of abandonment or discontinuation of use. This period may be extended at the request of the owner and at the discretion of the Building Commissioner. "Physically remove" shall include, but not be limited to:
- Removal of the solar energy system and related above grade structures.
 - Restoration of the location of the solar energy system to its natural condition, except that any landscaping, grading or below-grade foundation may remain in the after-conditions.
- (c) In the event that an applicant fails to give such notice, the system shall be considered abandoned or discontinued if the system is out-of-service for a continuous 12-month period. After the 12 months of inoperability, the Building Commissioner may issue a Notice of Abandonment to the owner of the solar energy system. The owner shall have the right to respond to the Notice of Abandonment within ten (10) days from Notice receipt date. The Building Commissioner shall withdraw the Notice of Abandonment and notify the owner that the Notice has been withdrawn if the owner provides information that demonstrates the solar energy system has not been abandoned.
- (d) If the owner fails to respond to the Notice of Abandonment or if after review by the Building Commissioner it is determined that the solar energy system has been abandoned or discontinued, the owner of the solar energy system shall remove the system at the owner's sole expense within thirty (30) days of receipt of the Notice of Abandonment. An extension of an additional thirty (30) days may be granted to the applicant for just cause by the Building Commissioner. If the owner fails to physically remove the solar energy system after the Notice of Abandonment procedure, the City shall have the authority to enter the subject property and physically remove the solar energy system.
- (e) The Planning Commission may at the time of the issuance of the Conditional Use Permit, and as a condition of the permit, require the applicant to provide a form of surety (i.e., post a bond, letter of credit or establish an escrow account or other) at the time of construction to cover costs of the removal in the event the City must remove the facility. The applicant shall submit a fully inclusive estimate of the costs associated with removal, prepared by an engineer registered in the State of Ohio. The amount shall include a mechanism to accommodate the rate of inflation over 15 years.

1477.12 SEVERABILITY

Should any section, subdivision, clause, or phrase of this ordinance be declared by the courts to be invalid, the validity of the ordinance as a whole, or in part, shall not be affected other than the part invalidated.

1477.99 PENALTY

Whoever violates any provision of this Chapter for which no other penalty is provided, or any rule or regulation promulgated thereunder, or fails to comply therewith or with any written notice, or order issued thereunder, or whoever interferes with, obstructs or hinders the Building Commissioner or his authorized representative while attempting to make inspections is guilty of a misdemeanor of the third degree as defined in the Ohio Revised Code. Each day such violation occurs or continues shall constitute a separate offense.