

ORDINANCE NO.: 2009-20 (Amended 8/25/09)
SPONSORS: COUNCIL MEMBERS CROCE AND RIDGEWAY
INTRODUCED: JULY 28, 2009

PLANNING

AN ORDINANCE ADOPTING AN ALTERNATIVE ENERGY SYSTEM CODE FOR THE CITY OF GREEN.

WHEREAS, due to recent drastic increases in the price of oil and gas products; and

WHEREAS, due to the downturn in the economy, numerous individuals, businesses, and communities have explored alternative means of providing for their energy needs; and

WHEREAS, the public health, safety, and welfare is best protected by the City of Green implementing reasonable procedures and restrictions on the use of alternative energy systems; and

WHEREAS, the City of Green Planning and Zoning Commission review the proposed Alternative Energy System Code and favorably recommended the approval of this Code by a vote of 5-0 on June 22, 2009.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF GREEN, COUNTY OF SUMMIT, AND STATE OF OHIO THAT:

SECTION ONE: TITLE

This Ordinance shall be known as the Alternative Energy System Code for the City of Green, Summit County, Ohio.

SECTION TWO: PURPOSE

This Ordinance is intended to regulate the construction and operation of alternative energy source facilities such as wind, less than 5 megawatts, solar, and wood burning, subject to reasonable conditions that will protect the environment, public health, safety, and welfare.

SECTION THREE: DEFINITIONS

Anemometer: a temporary wind speed indicator constructed for the purpose of analyzing the potential for utilizing a wind energy system at a given site. This includes the tower, base plate, anchors, cables and hardware, wind direction vanes, booms to hold equipment, data logger, instrument wiring, and any telemetry devices that are used to monitor or transmit wind speed and wind flow characteristics over a period of time for either instantaneous wind information or to characterize the wind resources at a given location.

Applicant: the property owner is required to make application for the Planning & Zoning Commission review; however, s/he may have anyone assist or make presentation before the Commission.

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Free-standing: an alternative energy system that is ground mounted and self supporting, although it may be attached to a primary structure for additional stability.

Fuel, Approved: approved fuel for outdoor furnaces shall be natural wood, corn, or the manufacturer's listed fuels. Burning of any and all other materials is prohibited, including but not limited to plastics, naphtha, leaves, trash, rubbish, garbage, construction materials, treated wood, yard waste, green wood, pallets, etc.

Furnace, Outdoor: any equipment, device or apparatus, or any part thereof, which is installed outdoors for the primary purpose of the combustion of solid, approved fuel to produce heat or energy used as a component of a heating system providing heat for any interior space or water.

Height, Appurtenance: an alternative energy system that is attached to the roof or extends above the highest peak of the roof of a primary structure may not exceed 10 ft in height. Measurement would be made from the peak of the highest roof point to the top of the unit.

Height, Wind Turbine: the distance measured from true grade at the base of the tower where it meets the slab or ground, to the highest point of the turbine rotor or tip of the turbine blade at its highest elevation.

Habitable Building, Structure: a structure constructed for human occupation such as a residence, school, hospital, church, public library or other building used for public gathering that is occupied or in use when the system permit application is submitted.

Nacelle: The encasement on a wind system that houses all of the generating components, gear box, drive team and other equipment.

Net Metering: The process by which surplus energy generated by a customer as measured by the difference between the electricity supplied by an electric service provider and the electricity generated by a customer in an applicable billing period, is fed back to the electric service provider with customer compensation.

Overspeed Control: a mechanism used to limit the speed of blade rotation so that it remains below the design limits of the wind turbine system.

Participating Landowner: the owner of the property(s) upon which an alternative energy system is located.

Public or Private Road: a full passage right-of-way or easement established to provide vehicular access to property(s).

Rotor: The rotating part of a wind system or turbine, including the blades.

Setback, Outdoor Furnace: the minimum setback for an outdoor furnace is twenty-five (25) feet from side and rear property lines, measured from the closest feature of the furnace to the property line.

Setback/fall zone, Wind Turbine: the distance from the alternative energy system to the property line and habitable structures on the turbine-site property.

Shadow Flicker: the visible flicker effect when rotating turbine blades cast shadows on the ground and nearby structures causing the repeating pattern of light and shadow.

Short Term Events: less than 48 hours for a period of increased rate of wind speed, and less than seven days for power outages.

Solar Energy Panel / System: a structure or panel containing solar cells that collects sunlight and converts it to electric current.

Water Pumper: a non-electrical wind system used for pumping water for agricultural use.

Wind Turbine, Building-mounted: a single wind conversion system mounted on a primary structure, designed to convert wind energy into electricity used primarily for on-site consumption. Includes all types of wind energy systems, turbines, cubes, spirals, etc.

Wind Turbine, Freestanding: a single mono-pole tower wind conversion system designed to convert wind energy into electricity used primarily for on-site consumption. Includes all types of wind energy systems, turbines, cubes, spirals, etc.

SECTION FOUR: ALTERNATIVE ENERGY SYSTEM TYPES

A. WIND TURBINES

(1) Development Standards

Single, mono-pole wind turbines are considered to be Conditional Uses in all zoning districts as primary or accessory structures.

Single, mono-pole wind turbines are subject to compliance with all requirements established in this chapter as well as all county, state & federal agency requirements, including the FAA due to possible proximity to Akron Canton Airport. Wind turbines supported by guy wires are not permitted.

As Conditional Uses, freestanding wind turbines shall be reviewed and approved through the Green Planning & Zoning Commission, through the established Site Plan Review Process and applicable fee schedule. Wind turbines that are installed as appurtenances to primary structures are not subject to Planning & Zoning Commission approval.

A water pumper is exempt from Planning & Zoning Commission review, but must be sited with setbacks to the property lines equivalent to the height of the tower plus ten feet.

Application submittals shall include a site plan, a line drawing identifying the electrical components of the system, detailed specifications for the wind turbine to be installed, a property entry agreement providing city access to the site in the event that decommissioning is required, evidence that the applicant has communicated with Ohio Edison regarding proposed interconnection to the utility grid.

Site Plan Requirements

Site plans for wind turbine projects shall be drawn to scale and clearly detail the following:

- a) Information about the proposed site, including all parcels, property lines, dimensions of the site, acreage, parcel number(s), current zoning designation and use.
- b) Indicate the location and dimensions of existing structures on the site, noting which are habitable; indicate habitable structures on adjoining property not owned by the applicant within 100 feet of the property lines in all directions;
- c) Free-standing turbines: Indicate the exact location and height of the proposed wind turbine, setbacks from the wind turbine to all property lines on the site and to all habitable structures within 100 ft;
- d) Specific location & positioning on the structure for building mounted units;
- e) Location of all above-ground utility lines, free-standing antennas, public & private streets, gas & oil storage and pumping facilities within the setback radius;
- f) Indicate the property owner, mailing address, physical address of the project;
- g) Wind Turbine: Include the make, model, picture/diagram showing the height to the hub and to the top of the blade when extended to the highest point, a cutaway view illustrating the foundation, manufacturer's specifications, and decibel level.

h) Photographs of the turbine location, taken from the property line and/or setback locations.

(2) Review & Permit Requirement

- a) Prior to installation of a freestanding wind turbine, the property owner is responsible for making application for a Conditional Use Permit through the Green Planning Department a minimum of 45 days prior to the intended meeting.
- b) The Planning Department will provide a minimum ten (10) day advance notification to contiguous property owners ~~or~~ **AND** property owners within a 200 ft radius of the project site via regular US mail through the Conditional Use process with specific information about the proposed project and the Planning & Zoning Commission meeting, date and time, when the project will be reviewed; and also publish the notification in newspapers of general publication in the city with the same advance notice period.
- c) After obtaining approval through the Green Planning & Zoning Commission, the property owner is responsible for ensuring that all required permits are obtained prior to initiation of construction, including City of Green permits and Summit County Building and any other permits deemed necessary.
- d) Prior to making any modifications to an existing wind turbine under a Conditional Use Permit that may materially alter the size and/or type of equipment, the applicant is responsible for contacting the Green Planning Department for alteration review. Like-kind replacements shall not require an additional review or permit.

(3) Location / Placement on Property

A freestanding wind turbine may be located in the side or rear yard on lots that exceed one (1) acre in area, subject to all setback restrictions. The turbine may be located in a front yard in specific applications, where the home is situated further from the street than current code permits, if double tower height setbacks can be met in all directions, or as approved by the Green Planning & Zoning Commission.

A building-mounted wind turbine may be installed on a primary structure located on any size parcel, in compliance with appurtenance height restrictions; a qualified professional must install the turbine, in accordance with manufacturer's guidelines. Building-mounted turbines are not subject to review and approval of the Green Planning & Zoning Commission.

Small, Accessory Use turbines may be approved by the Planning & Zoning Commission.

(4) Height Regulations

A freestanding wind turbine shall not be installed on an artificially established mound or base, with the intention of siting the system higher than natural grade settings.

- a) In all residential zoning districts, freestanding wind turbines shall not exceed 55 feet in height, or as approved by the Green Planning & Zoning Commission, and subject to required setbacks.
- b) In Business and Industrial Districts, freestanding wind turbines shall not exceed 75 feet in height, or as approved by the Planning & Zoning Commission and subject to required setbacks.
- c) Building-mounted wind turbines may be attached to primary structures, and may not extend more than 10 feet above the peak of the highest roof level.
- d) All moving parts, components, and blades of freestanding wind turbines shall be at least 15 feet above the ground and at least 15 feet above any open-air building features intended for human occupancy, such as balconies or roof gardens that are located directly below the wind turbine.

(5) Setbacks

Setbacks are established to create a fall zone. The minimum setback is equal to the height of the freestanding wind turbine plus ten (10) feet, measured from the base of the tower to property lines and habitable buildings contiguous to the site.

The entire fall zone must be free of overhead transmission lines, public or private streets, above-ground gas or oil storage or pumping facilities, habitable buildings.

For lots where property lines extend to the center of a road, the setback shall be measured to the road right-of-way or road easement.

(6) Nuisance Conditions

Anemometer

The construction of an anemometer tower for the purpose of collecting data to develop a wind energy system shall require a building permit conforming to the applicable sections of the State of Ohio Building Code and shall be permitted for a period not to exceed 18 months.

Sound

A normal sound pressure level shall be measured at the property line with the wind turbine turned off; a second measurement shall be made with the turbine turned on.

An acceptable wind turbine sound pressure level will not exceed twenty (20) decibels above the normal sound level measured at the property line. This level, however, may be exceeded during short-term events, such as times of excessive wind speeds or during power outages.

Shadow Flicker

During the location design phase, prior to installation, the property owner shall anticipate possible shadow flicker on neighboring properties, and make reasonable efforts to reduce or remove the impact to occupied structures.

(7) Safety Standards

Rotor Safety

Each wind turbine system must be equipped with both manual and automatic controls to limit the rotational speed of the blade to correspond with the design limits of the rotor.

Wind Turbine Tower Access

Tower-climbing apparatus for freestanding wind turbines shall be located no closer than 15 feet from the ground; or have a locked anti-climb device installed on the tower; or the tower shall be completely enclosed by a locked, protective six-foot tall fence.

Lighting

Wind turbines shall not be artificially lighted, except to the extent that may be required by the Federal Aviation Administration or other applicable authority that regulates air safety. The City shall notify the Akron Canton Airport of proposed structures.

Transmission lines

Transmission and power lines shall be placed underground.

(8) Appearance

Wind turbines and components shall be painted or finished with a non-reflective, unobtrusive color that blends into the surrounding landscape to the greatest extent possible.

Signage identifying the manufacturer, owner, and emergency contacts shall be posted on the turbine. Signage shall not exceed 1 sq ft; a sign permit is not required.

(9) Freestanding Wind Turbine Maintenance and Abandonment

The property owner is responsible for ensuring that the wind turbine operates as designed and in compliance with the guidelines established in this chapter. If a wind turbine system ceases to perform as originally intended for more than twelve (12) consecutive months, the property owner is responsible for repairing or totally removing all parts of the system no later than ninety (90) days after the end of the twelve-month period.

A wind turbine that is out-of-service for a continuous 12 month period will be deemed to have been abandoned. The Zoning Division may issue a Notice of Abandonment to the owner of a wind turbine that is deemed to have been abandoned. The Owner shall have the right to respond to the Notice of Abandonment within 30 days from Notice receipt date. The Zoning Division shall withdraw the Notice of Abandonment and notify the owner that the Notice has been withdrawn if the owner provides information that demonstrates the wind turbine has not been abandoned.

If the wind turbine is determined to be abandoned, the owner of a wind turbine shall remove the tower and all components completely at the Owner's sole expense within 3 months of receipt of Notice of Abandonment. If the owner fails to remove said tower and components from the site, the Zoning Division may pursue a legal action to have the tower and all components removed at the Owner's expense.

The property owner is responsible for all costs and expenses incurred in connection with the securing, removal, and disposal of the system. Upon failure to pay invoices for such costs and expenses within 30 days of invoicing by the City Finance Department, any unpaid costs will be placed as a lien to be collected as part of real estate taxes. The assessment of such costs shall be effective even if the property would otherwise be exempt from real estate taxation.

(10) Utility Connection

Energy systems proposed to be connected to the power grid through net metering shall adhere to Ohio Revised Code Section 4298.67.

(B) SOLAR PANELS

Solar panels mounted on primary structures are considered to be appurtenances and subject to applicable code restrictions in each zoning district: residential, business, and industrial. The amount of solar panels to be installed shall serve the needs of the structures located on the parcel.

Solar panels must be installed in accordance with the manufacturer's design and operation standards as well as all local, county, state, and federal guidelines.

Free-standing solar panels are considered to be accessory uses, subject to accessory use code and zoning & building permit requirements in each zoning district, however they shall not be counted as contributing to the total square footage of accessory uses/structures. Transmission and power lines shall be placed underground.

C OUTDOOR FURNACES

Not to be confused with wood-burning stoves and fireplaces, outdoor furnaces are generally installed outside, sometimes within a small insulated shed, some distance from the home for the primary purpose of the combustion of solid fuel (wood or corn) to heat interior space or water.

Outdoor furnaces are permitted accessory to residential uses in RR and R-1 zoning districts, and must also comply with county, state or federal agency guidelines. The City recommends installation by a qualified professional and strict adherence to manufacturer's instructions.

Outdoor furnaces shall be located on minimum one (1) acre lots to be used during the established burning season, in compliance with the following:

1. Outdoor furnaces installed after January 1, 2010 must be EPA Phase II Program Qualified Models, or better.
2. Outdoor furnaces may be located only in the rear yard;
3. Minimum setback to all property lines shall be 25 feet.
4. If located within 100 feet of any residence not served by the furnace, the stack height must be adjusted to minimize smoke encroaching onto neighboring properties at human-occupied levels.
5. ONLY natural wood or the manufacturer's listed fuels may be burned in any outdoor furnace. Burning of any and all other materials is prohibited, including but not limited to plastics, naphtha, leaves, trash, rubbish, garbage, construction materials, treated wood, yard waste, green wood, pallets, etc.
6. The maximum height for the furnace and/or enclosure shall not exceed 15 feet, measured from the average grade at the base of the furnace to the top, not including the stack.
7. The property owner is required to obtain all required permits, including a Green Zoning Permit for an accessory use and applicable permits through Summit County Department of Building Standards. (Note: the square footage of the furnace shall not be calculated into the total square footage allowed for accessory uses.)

8. Operation of outdoor furnaces is permitted during the established burning season, from September 15 through April 30.

SECTION FIVE: REMEDIES

It shall be unlawful for any property owner to fail to comply with the terms of this chapter, or create a nuisance condition for neighboring property owners.

If Green Zoning determines that a violation of the code or permit has occurred, the property owner shall be notified of the violations, in writing.

If the alleged violation does not pose an immediate threat to the public health or safety, the parties shall engage in good faith negotiations to resolve the issues at hand. Such negotiations shall be conducted within thirty (30) days of the notice of violation.

If the conditions pose an immediate threat to the public health or safety, the city shall require the offending alternative energy system to be discontinued until, through negotiations with all parties involved, a solution or system-modification can be achieved to resolve the problem.

If Green Zoning determines that the parties have not resolved the alleged violation, the city may revoke the Conditional Use Permit, as applicable, and/or institute enforcement proceedings or other remedy at law to ensure compliance with this chapter.

SECTION SIX: CODE LANGUAGE CONFLICT RESOLUTIONS

Existing code language in all zoning districts should be amended to include references to freestanding wind turbines as Conditional Uses in all zoning districts; building-mounted wind turbines and solar panels as appurtenances in all zoning districts; and, outdoor furnaces as accessory uses in residential districts on minimum one-acre properties.

SECTION SEVEN:

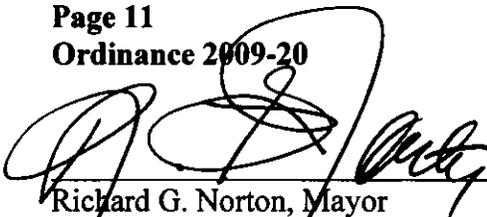
The City of Green finds and determines that all formal actions of this Council concerning and relating to the adoption of this Resolution were taken in open meetings of this Council and any deliberations of this Council and any of its committees that resulted in those formal actions were in meetings open to the public, in compliance with all legal requirements.

ADOPTED: August 25, 2009

Molly Stevens
Molly Stevens, Clerk

Dave France
Dave France, Council President

APPROVED: August 25, 2009

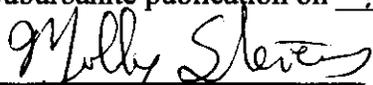

Richard G. Norton, Mayor

COPIED _____
SVCE ZONE PARK ROAD ENG
LAW FIN MAY PLAN FIRE

ENACTED EFFECTIVE: August 25, 2009

ON ROLL CALL: Colopy-yea Croce-yea France-yea Manwaring-yea
Reed -yea Ridgeway-yea Smole -yea Adopted 7-0 as Amended.

Suburbanite publication on August 30 and September 6, 2009


Molly Stevens, Clerk

6/16/2009 1:04 PM Approved as to form and content by Stephen J. Pruneski, Law Director

 7/21/09